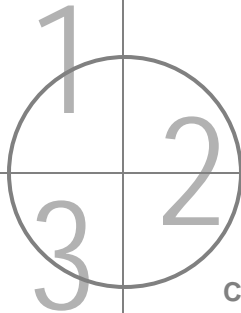


CITY OF FRESNO

Assessment



Comparative
Analysis

Solution
Recommendations

IT Service Needs Assessment

August 11, 2003

August 11, 2003

Mr. Bob Hendricks
City of Fresno
2600 Fresno Street
Fresno, CA 93721-1021

Dear Bob:

PTI is pleased to present this final Information Technology Service Needs Assessment. This report documents the analysis, findings, and recommendations from the IT study conducted from March 2003 through May 2003. We have provided ten bound copies, one unbound copy, and one electronic copy of the final deliverable.

I would like to take this opportunity to particularly thank you and the steering committee members involved in the project. Your collective interest, participation, feedback, and effort drove the creation of this study.

In many respects, provision of this report represents “the easy part.” Implementing our recommendations will require significant cooperation across departments – particularly the suggested reorganization of IT service delivery. **We would like to emphasize that our team viewed the work as a citywide effort; correspondingly, the recommendations are intended to be viewed from a citywide strategic perspective.**

We look forward to presenting our recommendations to the City Manager’s Office and designated members of Fresno’s management team when the City is ready.

Please call me at (425) 881-3991 with any questions or concerns about this report.

Sincerely,

Michael Silverman
Co-CEO

Table of Contents

Table of Contents

I. Executive Summary 1-1

II. Introduction

- Overview/Background 2-1
- Methodology 2-2
- Report Organization 2-3

III. Findings

- Overview 3-1
- Strengths 3-2
- Applications 3-3
- IT Service Delivery 3-8
- IT Decision Making 3-15
- Technical Infrastructure 3-30

IV. Recommendations

- Strategic Recommendations Overview 4-1
- Key Recommendations 4-2
- Additional Suggestions 4-8
 - Applications
 - Decision Making
 - Service Delivery
 - Infrastructure
- Benefits 4-17

V. Projects

- Overview 5-1
- Project Costs 5-2
- Project Summaries 5-4
- Recommended Project Schedule 5-8

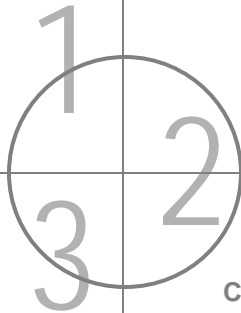
Appendices

- A. Customer Satisfaction Survey A-1
- B. IT Staffing Matrix Definitions B-1
- C. Project Cost Assumptions C-1
- D. List of Participants D-1

CHAPTER

1

Assessment



Comparative
Analysis

Solution
Recommendations

executive summary

IT SERVICE NEEDS ASSESSMENT

Chapter 1: Executive Summary

INTRODUCTION

In the fall of 2002, the City of Fresno recognized the need to prepare a comprehensive strategic information technology¹ (IT) plan. Unfortunately, funds were not available to complete the entire scope of work. The City decided to pursue an assessment of its current citywide IT position, leaving formulation of a citywide IT strategic plan and related prioritization of application investments to a future project.

In March of 2003, the City of Fresno engaged Pacific Technologies, Inc. (PTI) to perform a citywide information technology service needs assessment. The effort centered on analyzing citywide IT staffing, spending, and decision-making. It also included a high-level review of the City's applications and technical infrastructure.

PTI conducted this exercise in partnership with a project steering committee consisting of representatives from the Information Services Department (ISD), the City Manager's office, and a handful of other departments from across the enterprise.

PTI supported the effort through interviews, focus groups, and workshops involving over 100 City stakeholders. Additionally, PTI analyzed data related to citywide IT staffing, spending, and support, and gathered information to benchmark Fresno against similar organizations.

PTI's approach to technology planning examines four critical dimensions of IT:

- ◆ **Applications** – the software used to support the City's business functions
- ◆ **Service Delivery** – the citywide IT organizational structure and staffing approach to support ing applications and infrastructure
- ◆ **IT Decision Making** – the processes for making citywide IT investment decisions

¹ "Information technology" refers to the hardware and software used to collect, store, distribute and use data, including computers, servers, telecommunications equipment, etc. across the enterprise. Correspondingly, we did not limit the review to ISD – our work included all City departments.

- ◆ **Technical Infrastructure** – the databases, hardware, and networks deployed to support the applications

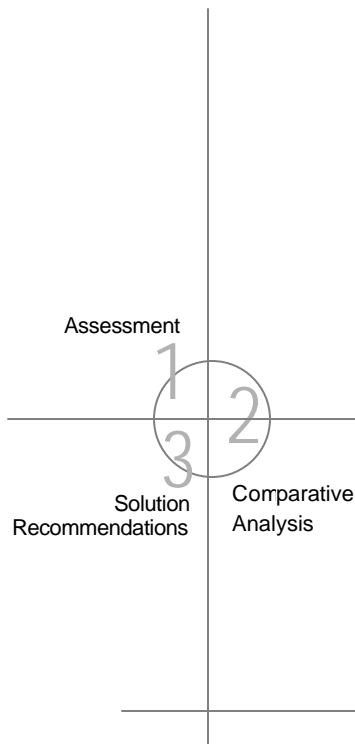
These four dimensions served as a common thread through the project's three major phases:

- ❶ **Technology Environment Assessment** – We conducted an evaluation of Fresno's current citywide IT position across the above dimensions and identified associated findings.
- ❷ **Comparative Analysis** – In this task, PTI attempted to conduct an external benchmarking survey to gather and analyze information on IT services, spending, and staffing from the City's peers. As only two cities responded to this survey, PTI augmented the results with data gathered on previous engagements and information from the Mayor's Council of Economic Advisors.
- ❸ **Recommendations Development** – Based on the information collected in the previous phases, PTI developed a set of recommendations to address identified issues, and created a high-level, costed workplan describing the key projects required to address critical areas of concern.

This report will provide the City with the foundation necessary to move forward in addressing immediate citywide IT issues, as well as serving as a blueprint for a broader strategic planning effort.

The remainder of this chapter summarizes the results of the planning work as follows:

- A. Overview
- B. Strengths
- C. Major Findings and Impacts
- D. Key Recommendations
- E. Recommended Projects & Costs
- F. Key Benefits



IT SERVICE NEEDS ASSESSMENT

Chapter 1: Executive Summary

A. OVERVIEW

No longer a small, central valley town, Fresno has grown into California's sixth largest city. Yet its approach to information technology has not grown up to match the City's size and complexity. *While the City has spent money on information technology, it has not done so in a planned and controlled fashion, limiting the value received from these investments.*

The net result is a City with an expensive and difficult-to-support technology portfolio. Despite sometimes significant expenditures, Fresno remains without effective applications in some areas, and with ineffectively supported applications in others. *Understaffing, particularly in the application arena, makes it difficult for the City to keep its software current.*

A lack of enforced standards on the desktop complicates the infrastructure and drives support costs higher. The situation has been compounded by a controversy over outsourcing – with an attendant impact on the morale of many ISD employees.

We have made a number of recommendations to help the City address the above issues. The recommendations fall into three major categories: opportunities to reduce cost, opportunities to achieve returns on additional investment, and major decisions facing the City.

The City's chief opportunities to reduce cost stem from centralizing infrastructure support, standardizing workstation configurations, and simplifying the application portfolio. On a cost-per-workstation and cost-per-server basis, centralized infrastructure support consistently represents the lowest-cost approach to managing these assets. The City's application portfolio is complex and appears to contain numerous redundant applications, presenting opportunities for simplification and attendant cost reduction.

Two primary application areas offer the prospect of a positive return on investment for the City: e-Government and maintenance management.

Providing citizens and businesses with "self-service" applications via the City's Web site can deliver the dual benefits of improved customer service and reduced internal labor costs. Unfortunately, achieving the internal labor savings associated with these initiatives requires tight integration between the "back-end" applications and the Web components. Fresno's applications will need to be upgraded to achieve this level of integration.

Automating maintenance management functions in infrastructure-intensive areas (e.g., utilities, transportation, etc.) is one of the few major application purchases that consistently pays for itself through efficiencies in labor, improved inventory management, and increased asset life.

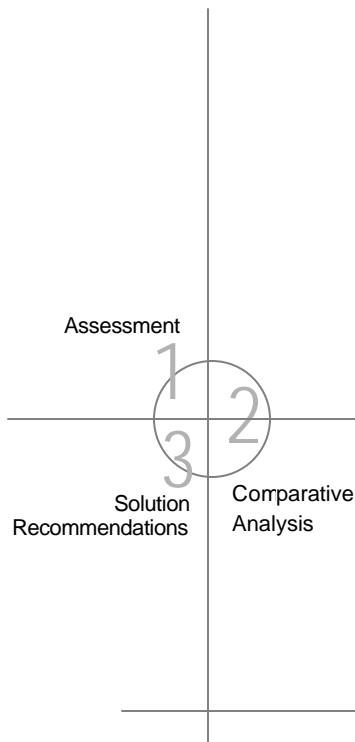
We also see the City facing several major decisions. The first concerns the PeopleSoft finance and human resource application. Fresno has fallen behind in their support of this package and is not seeing the full benefit achievable from this application. *The City needs to decide whether to commit the resources required to make effective use of PeopleSoft or whether it should move to a less functional, but more affordable, platform.*

In addition, the rest of the City's application portfolio needs significant investment. Fresno's e-Government, PeopleSoft, maintenance management, public safety, airport management, and geographic information systems all require additional funding and, likely, additional labor resources. Given that the budget does not exist to satisfy all these demands, Fresno must set its priorities.

This project has taken a hard look at the state of IT in the City and made some difficult recommendations. Where the course of action was not clear, the need to focus on cost containment served as the primary consideration that drove our thinking – while still bearing in mind a desire to position the City for growth.

Implementing these recommendations, particularly the suggested organization changes, will be difficult. It will require strong senior management support and trust across departments, particularly for areas that give up either staff or IT responsibilities.

PTI believes firmly that the recommendations are in the best long-term interests of the City – and that Fresno will be well served by putting them into action.



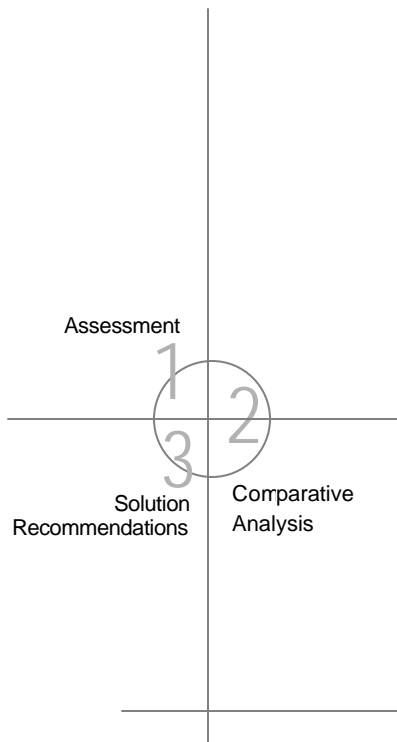
IT SERVICE NEEDS ASSESSMENT

Chapter 1: Executive Summary

B. STRENGTHS

While projects of this type necessarily focus on areas needing improvement, our assessment also brought to light positive aspects of IT at the City – areas that should be acknowledged and built upon. We summarize these below:

- ◆ **IT leadership is beginning to emerge with recent hiring, organizational changes, and efforts from the City Manager's office** – The recent CIO hiring has provided ISD – and ultimately the City – with a fresh infusion of experienced IT leadership. The effort to hire at that level reflects a shift in how City executives view IT and its role in the organization. Subsequent organizational adjustments have potentially positioned ISD to better provide IT services.
- ◆ **City help desk staff have good skills and are able to provide effective desktop support** – Despite recent staffing level reductions, City IT staff in direct support roles – both in ISD and in the departments – consistently rated highly in focus groups and the customer satisfaction survey. Their customers feel that, overall, they possess the skills necessary to maintain the City's infrastructure.
- ◆ **The City has made some meaningful investments in the ISD data center** – Over the last few years, consequential allocations of time and resources have occurred in the ISD-supported infrastructure. The result is that the City's core networks and servers will support Fresno well over the near term.
- ◆ **Recent investments in e-Government will make the City's web site reasonably current** – Fresno has redesigned the site and is steadily adding new self-service capabilities. The City is working cooperatively with the County and neighboring jurisdictions to develop additional functionality and regionalize the web presence – offering better value to the community.



C. MAJOR FINDINGS AND IMPACTS

In this section we highlight the most significant findings from the assessment and their corresponding impacts on the City. In keeping with the theme of our planning approach, we have organized our findings along the four dimensions of citywide applications, IT service delivery, IT decision making, and technical infrastructure.

APPLICATIONS

MAJOR FINDINGS

The City's approach to applications and automation of business functions appears to have occurred in a haphazard manner resulting in a portfolio that is difficult to manage and does not meet key user needs.

Specifically:

- ◆ **The City lacks an effective fire records management system**, and the Fire department has lost faith in the ability of the Data911 (the public safety dispatch and records management application) product to meet its needs
- ◆ **Fresno also does not have a comprehensive maintenance management application** to support the asset management needs of its infrastructure-intensive departments
- ◆ **The PeopleSoft finance and human resources system has been under-resourced and is several versions behind the vendor's current release** – putting vendor support of the City's application at risk; this expensive application is also a significant IT cost driver for the City
- ◆ **Small off-the-shelf and custom applications (e.g., ACT, Touch and Go, etc.) are numerous at the City** – consuming support resources and duplicating functionality already available in major packages
- ◆ **Incompatibility issues between older applications and new packages sometimes make it difficult for Fresno to stay current** – both Groupwise and WordPerfect have caused problems in this arena

IT SERVICE NEEDS ASSESSMENT

Chapter 1: Executive Summary

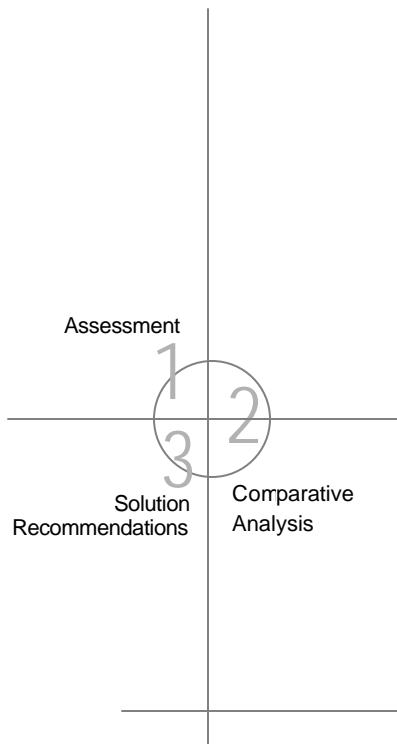
Fresno has made significant progress with its web site over the last several months and plans additional enhancements by year-end. If successful, these changes will make the City's web presence reasonably progressive in comparison with most municipalities. Nevertheless, challenges remain. *A lack of back-end integration means that many web transactions require manual entry into Fresno's systems.* Ongoing investment is also necessary to stay current in this rapidly advancing area, particularly in the realm of public access to information.

In addition, despite recent planning efforts, *the City lacks enterprise-wide or departmental visions for the use of geographic information systems (GIS).* Instead, departments have gone their own ways, developing specific, incompatible systems that rob the City of a GIS's greatest potential benefit – a spatial view of Fresno's resources, assets, and activities across the organization.

Lastly, *the City does not have a good inventory of its application portfolio.* There is no comprehensive database of existing, installed, and used applications. This severely complicates strategic management of the application architecture.

MAJOR IMPACTS

- ◆ The City's application portfolio needs considerable investment – and opportunities clearly exist for Fresno to reap a return on some of those expenditures
- ◆ Numerous "support" or "shadow" applications lead to increased maintenance effort, reduced functionality, inconsistency of business practice, poor integration, and limited visibility into City information for management purposes
- ◆ Lack of a common GIS platform and associated applications greatly limits the effectiveness of this tool at Fresno



IT SERVICE DELIVERY

MAJOR FINDINGS

City employees clearly perceive that Fresno's IT function is understaffed. Our analysis bore this out by showing that the City dedicates 1.9% of all City staff to IT functions – less than the 3-5% typical in larger municipalities.

While staffing analysis indicated that the City under staffs its IT function, spending analysis found Fresno's citywide IT expenditures to be at the upper end of the typical range.

We calculated Fresno's 2003 IT expenditures as 3% of its adjusted operating budget². This is at the higher end of the 1.5-3% range that we typically see for municipalities.

Despite initial appearances, these figures are not necessarily in conflict. The spending level is driven by:

- ◆ The City's choice of a high-end finance and human resources package – PeopleSoft customers are often at or above the high end of the usual range
- ◆ A complicated application portfolio
- ◆ A non-standard infrastructure
- ◆ The fact that Fresno's average IT staff compensation falls on the upper half of the typical scale for municipalities – pushing labor costs higher without corresponding FTEs on the work force

² This figure is based on FY 2003 Net Budget by Department Excluding Capital and Debt Service, combined with our staffing analysis to determine citywide IT labor costs. It does not include departmental goods and services spending on IT (which the City was unable to provide), or the lease payment for the PeopleSoft purchase – which is typically considered a capital cost in most jurisdictions. It also does not include a \$1.5 million grant for the Police Department – funds that have been removed from ISD's FY 2004 budget. Other purchases that may commonly be capitalized have not been removed from this calculation.

IT SERVICE NEEDS ASSESSMENT

Chapter 1: Executive Summary

These drivers indicate that, even though Fresno is spending at the upper end of the usual range, the City is not spending excessively on IT. In fact, even if Fresno achieves cost efficiencies in some areas, the City will need to increase spending to address other issues, adequately support its application portfolio, and position itself for the future.

A bigger concern is that the City does not appear to be reaping a return commensurate with its level of investment. We would not expect to see a municipality spending at this level so far behind in installation of current releases and lacking automation in major areas.

Regarding staffing levels, we found that the City has particularly understaffed its application support – which is problematic with an application portfolio as complex as Fresno’s. Organizations that have chosen simpler, integrated solutions can occasionally cut costs by reducing application support levels. Fresno’s use of the PeopleSoft application platform in concert with a very diverse collection of additional software requires a higher than average investment of support resources.

Other understaffed areas include project management, research, strategic planning, and first-level supervision.

Surprising to many in the City, on an enterprise-wide basis, the help desk function (desktop PC support) appears adequately staffed.³ However, problem resolution times at the ISD help desk were fairly high at the time of our analysis. Additionally, a significant portion of the survey respondents – corroborated by interviews and focus groups – indicated that staff often bypass the ISD and Police Department help desks and go directly to other IT support staff or colleagues, likely reflecting a lack of trust in or dissatisfaction with help desk service.

Adequate help desk staffing levels in combination with sub-standard service often indicate management issues and/or a difficult technical environment on the desktop. We found that Fresno evidences both of those factors.

³ With a ratio of 137 computers to each full-time-equivalent (FTE) of help desk effort, Fresno is within the typical range 100-150 to 1.

We also found that some decentralization of infrastructure support (management of servers, networks, and the desktop) has occurred at Fresno. This is likely not the most cost-effective approach to managing these assets, as it tends to encourage a non-standardized infrastructure, driving total support costs higher. It also does not effectively leverage specialized skills within ISD, as departmental support staff need to be “jacks of all trades.”

Finally, we found that ISD lacks necessary management positions. For instance, a large managerial span of control in the help desk area contributes to customer service issues. ISD’s customer services manager has nearly 20 direct reports, complicating the provision of effective oversight.

MAJOR IMPACTS

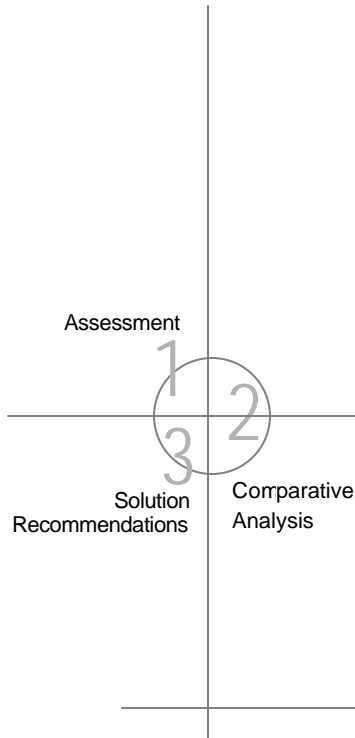
- ◆ Failure to devote adequate levels of resources to information technology limits the City’s ability to realize returns on investments in IT systems, particularly in the business application arena
- ◆ Ineffective and inefficient management structures lead to poor service delivery, reduced customer satisfaction, and cost inefficiencies
- ◆ Poorly served customers look for other means for IT support, complicating management of service delivery and helping evolve the infrastructure away from necessary standards

IT DECISION MAKING

MAJOR FINDINGS

The City has lacked effective IT leadership and vision for several years. While the recent hiring of a CIO mitigates this to some degree, the position does not have true citywide authority for IT, and a perception still exists that the City operates without citywide IT vision.

Additionally, no good mechanisms exist for guiding the application selection process from need identification through implementation. The CIO is not formally involved in departmental IT planning, and, to a large degree, the budget office approval process determines which IT projects get done. This has



IT SERVICE NEEDS ASSESSMENT

Chapter 1: Executive Summary

resulted in problematic procurements – such as the severely under-scoped Hansen project, and the long overdue Data911 effort. It also has contributed to the evolution of the City’s complex application portfolio and has made it difficult for ISD to effectively forecast support labor requirements.

Unlike almost every other public sector organization, the City has chosen not to capitalize its major IT purchases. Using current expenditures to pay for products such as PeopleSoft unnecessarily increases the City’s systems and acquisition maintenance (SAM) expenditures and associated chargebacks to operating departments. It may also discourage necessary spending on IT maintenance by artificially increasing current IT expenditures.

Lastly, public discussion of outsourcing the City’s IT function has led to a great deal of uncertainty. **PTI found that currently the City is ill-positioned to effectively exploit the benefits of outsourcing.** The following table rates Fresno against key characteristics of an organization ready to benefit from outsourcing:

Characteristics of “Outsourcing-Ready” Organizations	Fresno Position
Staff are unhappy with services they are receiving	●
IT function is presently well-staffed (suggesting that outsourcing resource requirements will not be greater than current resources)	○
Infrastructure is homogeneous	○
Application portfolio is simple and easy to manage	○
Initiative has clear, obtainable goals	○
Management metrics are in place	●
Political environment is amenable to outsourcing	●
Organization’s immediate market has adequate outsourcing options	unknown

Legend	
Matches characteristic	●
Partially matches characteristic	◐
Does not match characteristic	○

As the table indicates, it is very unlikely the City could effectively outsource its IT function. A majority of the readiness issues would need to be addressed before the City could viably outsource

its IT service delivery. Chapter 3 contains additional findings related to outsourcing.

MAJOR IMPACTS

- ◆ Lack of citywide IT leadership has led to a splintering of IT activities throughout the organization, as well as poor investment decisions
- ◆ The City’s approach to funding IT inflates current IT expenditures – and the resultant chargebacks – with no appreciable improvement in service delivery
- ◆ The desire to pay for IT through current expenditures instead of the traditional capitalization model discourages the City from making large investments
- ◆ Failure to prioritize IT at the executive level and make ongoing investments (a de facto requirement with IT in the modern era) has resulted in the short-term need to make large expenditures to maintain basic functionality – requiring the City to pay penance for these omissions at a time when finances are particularly tight
- ◆ Indecision around outsourcing has impacted ISD morale, and has led to loss of staff

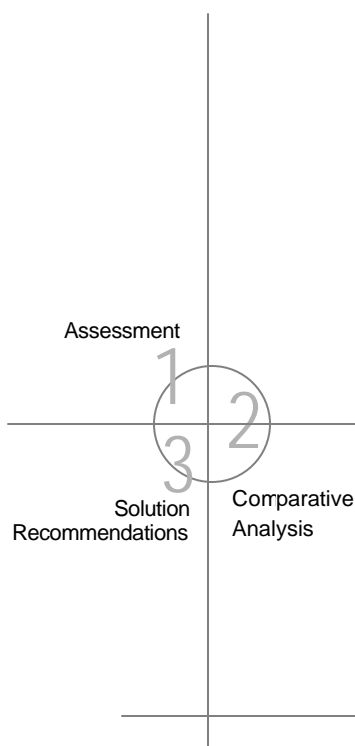
TECHNICAL INFRASTRUCTURE

MAJOR FINDINGS

Remote connectivity – always a problem in dispersed organizations – still needs improvement, despite some recent gains.

City Hall is wired for a networking technology that has largely disappeared from the marketplace and is no longer in use at the City. Due to a piecemeal funding approach, the City has creatively managed to “make due” with this wiring by using moderately priced short-term fixes that allow the network to be used with current technologies – albeit unreliably.

While ISD’s computer room is largely in good shape due to recent investments and sufficient staff resources, the desktop and application development environments are a mix of systems and



IT SERVICE NEEDS ASSESSMENT

Chapter 1: Executive Summary

standards. The City has numerous desktop operating systems, development tools, and personal productivity suites (i.e., many versions each of MS Office and Corel Office suites).

MAJOR IMPACTS

- ◆ The City's approach to extending the life of its outdated network wiring has led to increased long-term costs and a network and applications that are still unstable for users
- ◆ Complex, non-standard environments make support more difficult and ultimately increase cost
- ◆ In particular, the mixed office suite environment not only increases support costs, but also reduces employee productivity through impeded data sharing

D. KEY RECOMMENDATIONS

Based on the findings identified during assessment, PTI defined several key recommendations for the City regarding IT. The following presents those recommendations, and outlines attendant benefits.

CHART A CLEAR PATH FOR FRESNO'S APPLICATION PORTFOLIO

Establish priorities and allocate funding for e-Government, maintenance management, and geographic information systems. Once priorities are established, specific plans for the high-priority projects should be developed.

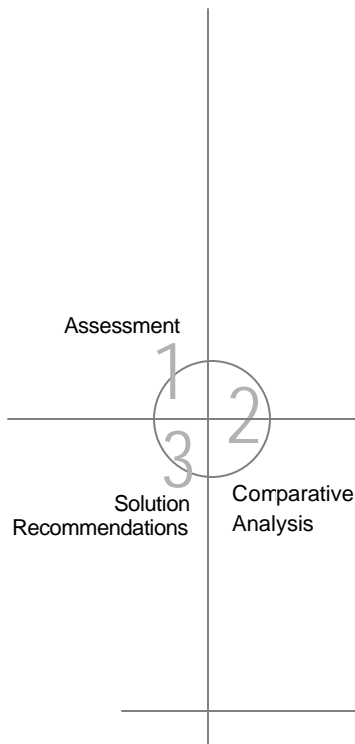
Simplify the overall application portfolio, reducing support costs and increasing the effectiveness of major packages.

Make a decision about PeopleSoft. While we believe PeopleSoft is an appropriate product for Fresno, if the City is going to keep this package, the level of ongoing resources committed to its support should be increased. An effort also should be made to revise business processes to take full advantage of the application's capabilities.

If Fresno cannot make this commitment, PTI recommends examining second tier alternatives for automating finance and HR functions⁴. Moving to these applications, while expensive at the outset, can result in long-term cost savings through reduced support and maintenance costs – with some reduction in functionality and flexibility. The City would, of course, also run the dual risks of outgrowing such a package and suffering cost overruns during the implementation project that could significantly reduce the financial benefit.

Fresno may wish to undertake a feasibility study to serve as a basis for deciding whether to keep PeopleSoft or move to a lower-cost package.

Address the City's public safety dispatch and records management system situation. The Data911 CAD/RMS project should be examined, not in an effort to assign blame, but to identify the state of the project, understand Data911's "fit" in the overall public safety application architecture, and develop a workable completion plan. This effort should strive to simplify the public safety application portfolio to the greatest possible extent. In this effort, the City must pay particular attention to the needs of Fire – a group that is deeply dissatisfied with Data911.



⁴ These systems are from vendors that target medium to small organizations. The applications typically offer similar base functionality to the first tier products, but are less sophisticated in their ability to be tailored and lag two to three years behind in new functional and technical features.

IT SERVICE NEEDS ASSESSMENT

Chapter 1: Executive Summary

REORGANIZE ASPECTS OF IT SERVICE DELIVERY

To meet current and future needs and more effectively use its existing resources and skill sets, the City should re-allocate IT responsibilities to better align with its size and the need for low-cost service delivery.

Consolidate citywide IT infrastructure responsibilities in ISD, including support for FPD infrastructure and moving the Communications Division under ISD. This includes server and database operations as well as basic help desk and PC support.⁵

Combined with improved management attention in these areas, this shift provides the best short-term mechanism for getting the infrastructure under control, and lets departments focus on meeting their business objectives – not low-level technology support.

Over the long term, the convergence of telecommunications and data networking infrastructure (and associated support skills) argue for putting the communications group under ISD from a strategic perspective.

When managed correctly, our experience also indicates that this represents the lowest-cost approach to operating the infrastructure – an important consideration in Fresno.

Give the departments greater authority for business application support over time. This authority must come with corresponding responsibility to adhere to standards and be checked by strong CIO oversight. Applications that impact more than one department can be the responsibility of one of those departments, or ISD. Enterprise-wide applications (e.g., email, etc.) would remain with ISD. Departments that want to keep their support

⁵ PTI understands that the Police Department has expressed concerns about this recommendation in light of the need for the Police Department to control the security of its systems. We believe that these security needs can be met through close cooperation between ISD and FPD.

with ISD can contract with ISD for that service. Control systems (e.g., SCADA, environmental controls, etc.) should remain the responsibility of the departments. *Note that this shift should not occur until after the City has addressed other issues with its application portfolio.*

Consistent with our theme of positioning the City for growth, the latter recommendation puts support staff for applications in the business units, where they are close to the users. Many mid-size and most large municipalities have adopted this approach.

Chapter four provides additional detail surrounding our organization recommendations.

DO NOT PURSUE LARGE-SCALE OUTSOURCING OF IT AT THIS TIME

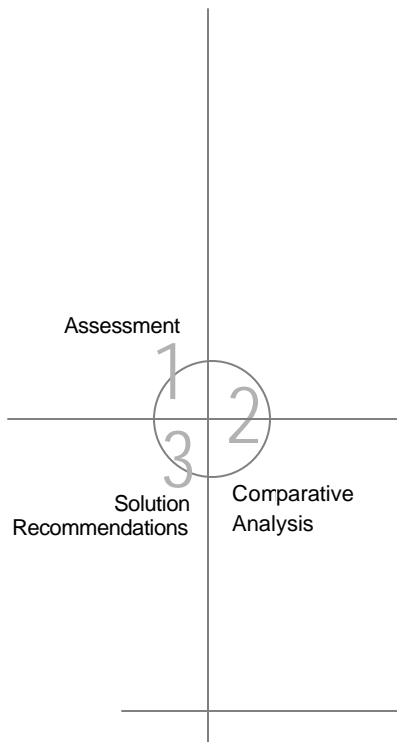
Given its complex application architecture, poor control over hardware and application configurations and inventories, already sparse application support staffing levels, and limited management tools and metrics, it is very unlikely the City could effectively outsource its IT function today.

Address existing issues through management improvements, rationalization of the application portfolio, and restructuring the provision of workstation and infrastructure services. Over the near term, Fresno will be better served by these changes.

Once the above steps have been taken, selective outsourcing of specific IT functions may offer some benefit, but only when clear, achievable objectives have been defined.

ADJUST IT STAFFING LEVELS

Formally identify and prioritize application needs, and staff accordingly. If the City does not simplify its application portfolio, this effort will undoubtedly result in increasing the number of application support specialists.



IT SERVICE NEEDS ASSESSMENT

Chapter 1: Executive Summary

Even with simplification, an increase may still be warranted, as PeopleSoft is under-resourced, and we anticipate that potential new maintenance management and e-Government applications will require support. The Data 911 application will also need permanent staff assigned.

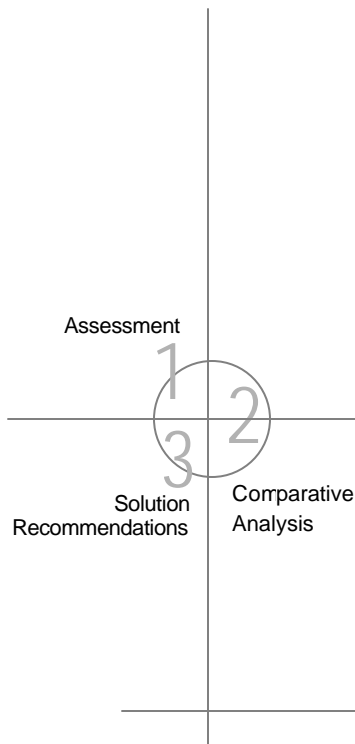
Address staffing shortfalls in other areas of ISD, including management, planning, and project management.

CHANGE IT FUNDING MODEL(S)

The intention of these recommendations is to improve how information technology is paid for and managed. First and foremost, the City must move toward a funding model that looks at IT assets not as one-time purchases, but as critical infrastructure in need of ongoing investment. Correspondingly, Fresno should:

- ◆ ***Avoid the use of current expenditure funds for major applications and systems***
- ◆ ***Move toward a more traditional municipal capitalization approach***
- ◆ ***Institute true replacement funds for minor but numerous investments (e.g., PC's, networking systems, etc.)***

The City must also ***adjust its chargeback approach to reduce unnecessary requests and improve service delivery***. While baseline charges are necessary to ensure that past ills of underinvestment in maintenance do not continue, additional effort – specifically in applications – should be charged back on a usage basis, and not as a lump sum unrelated to the services provided (as it is now). This protects application specialists from “free riders” who over-request services while also providing customers with a direct linkage between what they pay and the services they receive.



DEVELOP IT STRATEGIC PLANS

The long-term lack of IT leadership has led to a dearth of consistent IT vision in the City. This recommendation calls for the City to complete efforts started as part of this IT Service Needs Assessment and:

- ◆ ***Create a formal citywide IT strategic plan***
- ◆ ***Conduct a similar exercise for individual departments***

The citywide plan should include a vision for IT in both the near and distant future at the City and clarify application priorities. While this plan will set overarching goals and objectives for the use of technology, departments need to set such goals and objectives at a granular, business-focused level. This will ensure that they have an effective roadmap for using information technology to meet specific line of business requirements.

EXPAND THE AUTHORITY OF THE CIO TO ENCOMPASS ALL CITY INFORMATION TECHNOLOGY

Create a true chief information officer position with responsibility for and ultimate authority over IT citywide, putting Fresno's CIO on par with CIOs at other large municipalities.

We recommend that this position retain overall operational responsibility for ISD. More importantly, the position must have oversight responsibility for – and corresponding authority over – all IT activities in the City. Note that this does not mean that all IT staff must report to the CIO. Rather, the CIO must have the authority to approve citywide IT budgets, control standards, ensure that investments align with overall City goals, and intervene when necessary.

In practice, this authority is to be used not as the proverbial stick, but as insurance that any IT effort in the City is effectively and efficiently managed, and provides the greatest cross-organizational benefit possible.

The City must also ***develop better mechanisms for making decisions around IT investments***. This includes putting formal processes in place to involve the CIO in all major IT decisions, and for ensuring that departments adhere to City IT standards.

IT SERVICE NEEDS ASSESSMENT

Chapter 1: Executive Summary

Many such decision structures also include a governing board composed of senior managers from the organization and, perhaps, outside representation.

These recommendations are pivotal to the success of many other recommendations. The oversight authority and responsibilities are necessary to address existing IT issues, ensure more effective future deployment of IT resources, and help the City focus on cost-effective use and support of information technology.

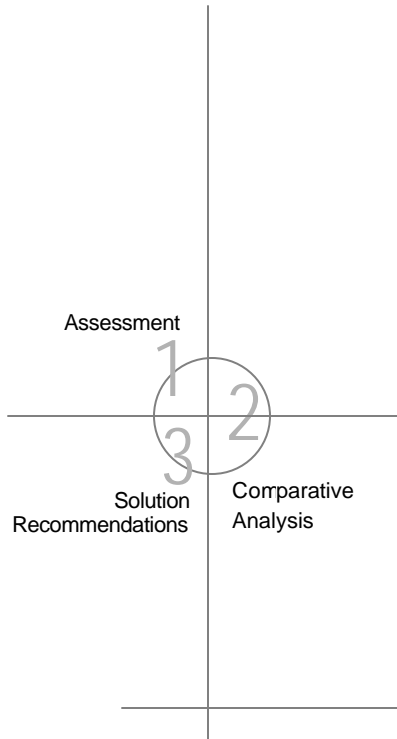
E. RECOMMENDED PROJECTS AND COSTS

This section presents the projects, cost estimates, and proposed schedule associated with implementing the IT Service Needs Assessment's key recommendations.

The following page presents high-level cost estimates for the recommended projects. The cost estimates include both lower- and upper-range one-time costs. They do not include recurring costs or internal City labor costs associated with the recommendations. **Note that we believe that completion of a City-wide IT strategic plan will result in identification of substantial additional projects.**

Note that, because the scope of the capital projects depends heavily on the results of the planning projects, the associated cost ranges are relatively large. Appendix C presents the assumptions behind the cost estimates.

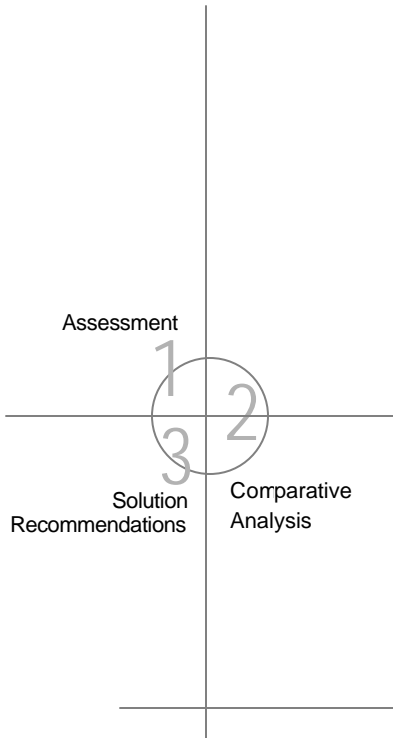
A Gantt chart providing the recommended project timeline follows the cost table.



ESTIMATED PROJECT COSTS

Chapter 1:
Executive Summary

Planning Projects	One-Time Costs	
	Lower	Upper
P1 Complete strategic planning processes	\$ 153,525	\$ 511,750
P2 Enhance CIO responsibilities	\$ 8,625	\$ 28,750
Create decision-making and governance structures to support P3 codified responsibilities	\$ 10,350	\$ 34,500
P4 Implement organization and staffing recommendations	\$ 10,350	\$ 34,500
P5 Implement funding recommendations	\$ 10,350	\$ 34,500
P6 Conduct Data911 project review and strategy development	\$ 13,800	\$ 46,000
P7 Update strategic GIS plan	\$ 29,325	\$ 97,750
P8 Develop e-Government plan	\$ 15,094	\$ 50,313
P9 Determine future FMS/HRMS direction	\$ 15,094	\$ 50,313
Planning Projects Subtotal	\$ 266,513	\$ 888,376
Capital Projects		
C1 Upgrade PeopleSoft	\$ 1,380,000	\$ 3,450,000
C2 Standardize computing environments	\$ 598,050	\$ 1,244,500
C3 Complete public safety CAD/RMS	\$ 603,750	\$ 5,100,000
C4 Implement e-Government plan	\$ 125,000	\$ 2,500,000
C5 Implement GIS plan	\$ 600,000	\$ 1,262,500
C6 Procure and implement maintenance management	\$ 1,250,000	\$ 3,500,000
Capital Projects Subtotal	\$ 4,556,800	\$ 17,057,000
Total - All Projects	\$ 4,823,313	\$ 17,945,376



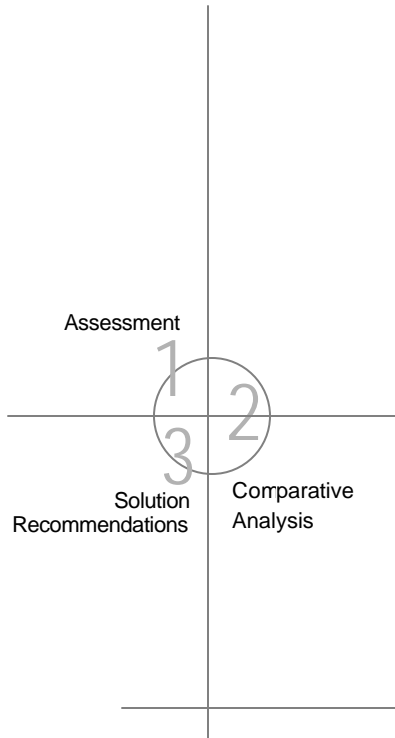
- ◆ The above table presents one-time cost estimates for each recommended project
- ◆ Internal labor costs are not included in these figures
- ◆ The “lower costs” reflect reduced scope and/or a higher percentage of internal labor
- ◆ Chapter 5 and Appendix C provide more detail about project and costs
- ◆ Project C1, Upgrade PeopleSoft, would depend upon the outcome of project P9, intended to determine whether the City should stay with PeopleSoft

IT SERVICE
NEEDS
ASSESSMENT

RECOMMENDED PROJECT SCHEDULE

Chapter 1:
Executive Summary

Task Name	Start	Finish	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Planning Projects	Wed 10/1/03	Thu 6/30/05													
P1. Complete strategic planning processes	Wed 10/1/03	Thu 7/1/04													
P2. Enhance CIO responsibilities	Wed 10/1/03	Thu 4/1/04													
P3. Create decision-making and governance structures	Thu 1/1/04	Thu 7/1/04													
P4. Implement organization and staffing recommendations	Thu 1/1/04	Fri 12/31/04													
P5. Implement funding recommendations	Fri 10/1/04	Thu 6/30/05													
P6. Conduct Data911 project review and strategy developm	Wed 10/1/03	Thu 4/1/04													
P7. Update GIS strategic plan	Fri 10/1/04	Fri 4/1/05													
P8. Develop e-Government plan	Wed 10/1/03	Fri 4/30/04													
P9. Determine future FMS/HRMS direction	Wed 10/1/03	Wed 12/31/03													
Capital Projects	Thu 1/1/04	Fri 3/31/06													
C1. Upgrade PeopleSoft	Thu 1/1/04	Thu 9/30/04													
C2. Standardize computing environments	Fri 10/1/04	Fri 4/1/05													
C3. Complete public safety CAD/RMS	Thu 1/1/04	Thu 9/30/04													
C4. Implement e-Government plan	Thu 7/1/04	Wed 6/29/05													
C5. Implement GIS plan	Fri 4/1/05	Fri 3/31/06													
C6. Procure and implement maintenance management	Thu 4/1/04	Fri 9/30/05													



F. KEY BENEFITS

In many respects, this planning effort represents the “easy part.” The real work lies ahead: developing a comprehensive strategic direction for IT at the City, and translating these recommendations and that direction into *results*. The projects presented in the previous section require IT investment of both resources and dollars – in a time when those resources are particularly scarce. To successfully move forward and realize the benefits of these projects, the City must commit the requisite time and funding. **These planning efforts ultimately belong to the City, with executive, management, and staff involvement to see these initiatives to their fruition.**

If the City can successfully bring the appropriate resources and support bear on IT over the next two years, it should realize the following benefits:

Key Benefits

• Progress within Fresno’s application portfolio, including:

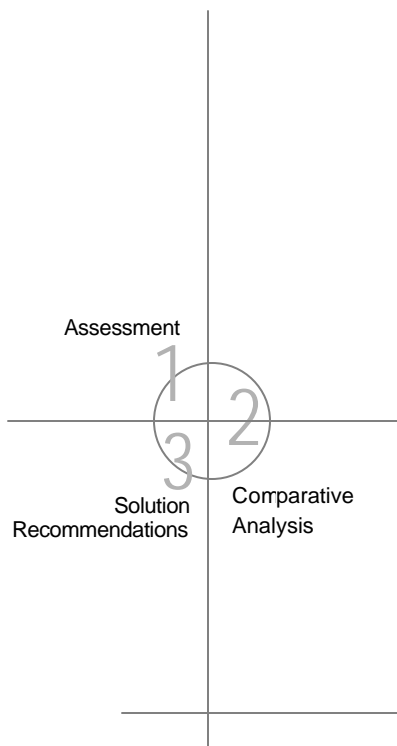
- A clear, communicated plan for Fresno’s e-Government direction
- Improved automation for the City’s maintenance management functions
- A course of action to address the Data911 implementation
- Formal plans for other major application investments
- A simplified, more cost-effective overall application portfolio

• Significant enhancements to IT decision making, including:

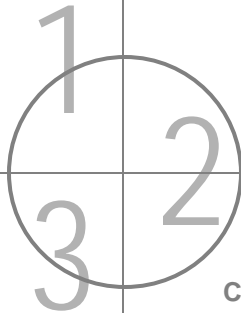
- A clear roadmap for IT, both City-wide and departmentally
- Ability to adequately fund IT maintenance and upgrade projects
- Being better positioned to fund major projects (e.g., maintenance management systems, GIS, etc.) through appropriate funding mechanism (e.g., capital funding)
- A charges methodology that motivates judicious use of application support services

• Improvements in IT service delivery, including:

- A structure that positions Fresno for future growth and supports a focus on cost-effectiveness
- IT leadership with the authority to decide IT issues and oversee IT initiatives citywide
- Better management and utilization of help desk resources
- Improved clarity of IT roles and responsibilities for IT staff and customers
- Application support staffing levels matched to need and workload
- Improved security and reduced workstation and server support costs



Assessment



Comparative
Analysis

Solution
Recommendations

introduction

Overview / Background

INTRODUCTION 2

In March 2003, the City of Fresno asked Pacific Technologies, Inc. (PTI) to assess information technology (IT) across the City and report on our findings and recommendations. In performing our research and analysis, PTI examined four areas of city-wide IT: software applications, service delivery, decision making, and technical architecture.

While this effort touched on most aspects of IT at the City, it does not reflect a complete strategic IT plan – an exercise Fresno still must complete.

This chapter discusses our project approach and provides an outline of the remaining chapters. It includes:

- ◆ Methodology
- ◆ Report Organization

Methodology

INTRODUCTION 2

PTI performed the review in three phases:

- ◆ **Phase One assessed city-wide use of technology, including:**
 - Gathering input from almost 100 stakeholders by conducting 10 management interviews and 6 focus groups
 - Reviewing prior studies and related documentation
 - Assessing IT organization structures and staffing levels
 - Reviewing the City's technical configuration and automation
 - Conducting an analysis of IT spending
 - Defining strategic technology issues
- ◆ **Phase Two centered on a comparative IT survey of Fresno's peer cities, that included:**
 - Identifying and contacting cities similar in size, services, and/or demographics
 - Analyzing survey results
- ◆ **Based on our findings, we developed recommendations in Phase Three – key activities involved:**
 - Identifying application opportunities in the City's business functions
 - Developing organization and operations recommendations
 - Recommending improvements to the City's IT governance and funding practices
 - Previewing recommendations in a workshop with the steering committee

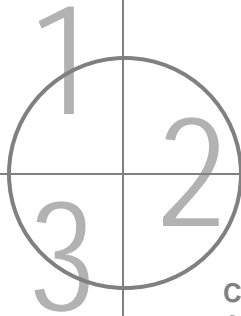
[Report Organization]

INTRODUCTION 2

The remaining chapters of this report are organized as follows:

- ◆ **Chapter Three** presents our findings from the assessment phase across the areas of applications, service delivery, decision making, and technical infrastructure
- ◆ **Chapter Four** makes recommendations that address the issues identified in Chapter Three
- ◆ **Chapter Five** identifies projects and costs that follow from our recommendations
- ◆ **Appendices** provide additional detail and supporting materials

Assessment



Comparative
Analysis

Solution
Recommendations

findings

Overview

CHAPTER

3

This chapter contains our findings on Fresno's city-wide software applications, IT service delivery, IT decision making, and technical infrastructure. It presents:

- ◆ Strengths
- ◆ Applications Findings and Impacts
- ◆ IT Service Delivery Findings and Impacts
- ◆ IT Decision Making Findings and Impacts
- ◆ Technical Infrastructure Findings and Impacts

Note: This assessment represents a point in time — it reflects a “snapshot” of the state of IT at Fresno during the period in which the analysis took place and does not reflect changes that occurred after March 2003

Strengths

CHAPTER

3

Projects of this nature often tend to focus exclusively on areas of concern. Through the course of our assessment, we identified a variety of IT strengths worth noting — and building upon. These include:

- ◆ **The City is aware of existing IT -related issues – prior to this study, the City had already identified areas of need that are also noted in this report; and some resulting initiatives are underway**
- ◆ **IT leadership is emerging with the recent hiring of a CIO who has taken steps to improve communication with other departments, including clarifying the ISD charges methodology**
- ◆ **IT staff provide good basic hardware and desktop support – many users report that IT staff are responsive, knowledgeable, and helpful in these areas**
- ◆ **Overall, Fresno’s technical infrastructure is adequately designed and managed**
- ◆ **The City utilizes an effective suite of “backend” system management tools**
- ◆ **GroupWise is effective and mail and calendaring functions work well for most people**
- ◆ **ISD staff and departmental IT staff have good working relationships**
- ◆ **The City has invested in the ISD data center, resulting in core networks and servers that meet the City’s current needs**
- ◆ **The City has been improving its Web presence and will soon be relatively current in offering self-service opportunities via the Internet**

Applications: Overview

CHAPTER 3

***Applications* refer to the software used to support City business functions.**

PTI's project scope provided for a limited review and analysis of Fresno's business systems. This section presents our assessment results regarding the City's primary software applications as follows:

- ◆ Findings
- ◆ Impacts

Findings: Applications

CHAPTER

3

This section summarizes PTI's application-related findings:

- ◆ **The City's application portfolio is an area of great concern, with some major applications not on their current release, others simply being outdated, and some business areas having significant automation deficits – indicators that the City will need to invest considerably in its application architecture**
- ◆ **Other overarching application-related issues include:**
 - Disparate silos of automation rely on a wide variety of underlying technologies
 - The City does not have a comprehensive application or license inventory
- ◆ **The City's PeopleSoft implementation is outdated and not well supported:**
 - The City has not kept PeopleSoft current and has not budgeted to do this
 - Business processes were not significantly reengineered to align with the system to attain the greatest benefit from the application
 - PeopleTools have been heavily employed to tailor the application leading to increased support requirements
 - The City has not taken full advantage of the application's capabilities
 - PeopleSoft support staff has open positions and is understaffed for an organization of Fresno's size
- ◆ **Data 911 implementation has been problematic:**
 - Outside of the initial selection, the project has had no ISD involvement
 - The application is heavily customized in a market that has largely gone to out-of-box solutions and an environment where regionalization and associated data sharing is increasingly necessary and facilitated through package systems

Findings: Applications, cont.

CHAPTER

3

- Implementation has taken five years so far – an inordinate length of time
- Although the Police Department (FPD) has been working on consolidation, many shadow applications remain, indicating functional deficiencies
- Fire is very unhappy with the application
- ◆ **Work management is only partially automated through a variety of applications – even though this is one of the few areas that demonstrates achievable payback on investments:**
 - Applications in use include MS2000 for facilities management and small MS Access applications
 - Hansen has been selected by the City, but is unimplemented
- ◆ **Recent improvements notwithstanding, several opportunities exist to improve the City's e-Government position:**
 - While “online” transactions are available, most involve manual entry of the collected data – indicating that “back end” systems lack necessary interfaces
 - The City is only beginning to act on plans to improve the City's site as a communication tool and deploy cross-jurisdictional services
 - Recent improvements and planned updates over the remainder of this year will make Fresno's Web presence reasonably current with progressive jurisdictions
 - Remaining current will require ongoing investment as jurisdictions and their stakeholders adapt to the capabilities of the Web
 - Fresno will need to address back-end integration issues as well as policy and procedure questions in order to effectively advance its Web presence

Findings: Applications, cont.

CHAPTER 3

- ◆ **ISD has a large backlog of application-related projects that have not been costed or prioritized**
- ◆ **The City has experienced problems with GroupWise in meeting some recent technology demands (e.g., wireless email, record requests, etc.)**
- ◆ **The City maintains multiple versions of two personal productivity suites, MS Office and Corel – contributing to problems with data sharing and complicating technical support of the desktop**
- ◆ **Respondents expressed higher satisfaction with MS Office than with Corel in customer survey results – though both suites had significant percentages of respondents who were very dissatisfied**

Impacts: Applications

CHAPTER 3

The preceding applications findings lead to a variety of impacts:

- ◆ Failure to keep applications current and to automate major business functions means that the City does not fully achieve the benefits available from information technology
- ◆ The lack of a comprehensive application inventory limits the City's understanding of its application portfolio and impedes the City's ability to assess gaps definitively, prioritize application needs, or simplify the application architecture
- ◆ The City's wide variety of underlying technologies has resulted in redundancies and incompatibility between systems
- ◆ Unsuccessful or outdated implementations in critical functional areas (e.g., PeopleSoft in Finance, Data911 in Public Safety, Hansen for maintenance management) have left users dissatisfied with these applications and encouraged the development of shadow applications – further complicating the City's application environment
- ◆ Maintaining two personal productivity suites has caused incompatibility between common work products, frustrated users who maintain both suites, and generally come to represent the City's lack of IT decision making

[IT Service Delivery:]

Overview

CHAPTER 3

***IT service delivery* refers to the IT organizational structure and staffing approach to supporting applications and infrastructure. At Fresno, these components span ISD and the Departments' IT resources. This section presents our assessment of IT service delivery provided by both groups as follows:**

- ◆ Findings
- ◆ Impacts

Findings: IT Service Delivery

CHAPTER

3

This section summarizes PTI's IT service delivery findings:

- ◆ **According to the customer survey, City staff, with the exception of Fire, seem reasonably satisfied with IT service delivery:**
 - The Mayor's Office, City Council, the City Manager's Office, and the City Clerk expressed the most satisfaction with IT service delivery
 - Fire is significantly dissatisfied across all dimensions of IT, including service delivery
 - Both ISD and FPD Help Desks scored well, although staff who call the FPD Help Desk for primary support expressed a higher level of satisfaction with help desk response than staff who call the ISD Help Desk first
- ◆ **Opinions expressed in focus groups and interviews did not necessarily correlate with customer survey findings:**
 - Contrary to survey results, focus groups and interviews suggested that City staff are dissatisfied with various aspects of IT service
 - Potential reasons for these conflicting results may stem from a general tendency for opinions to be amplified in open group settings and personal interviews as well as for individuals completing surveys to give more consideration to the potential impacts of their answers on their colleagues

Findings: IT Service Delivery, cont.

- ◆ **With approximately 76 FTEs devoted to IT, Fresno should be relatively specialized and demonstrate technical depth in key disciplines:**
 - Individual ISD staff appear appropriately focused in a limited number of disciplines
 - Departmental IT staff, because they have broader responsibilities, tend to have less specialization
 - The scope of our study did not allow for evaluation of specific technical skills
- ◆ **At a PC to support staff ratio of 137:1, Help Desk (Tier 1) and Desktop Support (Tier 2) are adequately staffed for current workload; however, additional findings highlight issues aside from resources that may hamper customer service:**
 - While enterprise PC support ratios seem aligned with relatively high customer satisfaction survey results, they do not correlate well with interview and focus groups findings or with trouble-ticket analysis, which suggested that response is often slow (note that this finding reflects ISD trouble tickets only; FPD trouble tickets data was not made available)
 - Customer survey results revealed that users go to various sources for their primary IT support, regardless of their department resources or City protocol, preventing analysis of PC to support ratios within departments:
 - Approximately 60% of respondents bypass the Help Desk (both ISD and FPD Help Desks)
 - Virtually every department, including FPD, relies on ISD for some level of Tier 1 and Tier 2 support
 - Lack of clarity around roles and responsibilities between ISD and departments likely causes labor inefficiencies, even while capacity probably exists to add some workload to the PC support function

Findings: IT Service Delivery, cont.

- ◆ **Overall, 1.9% of City staff support IT, including the Communication Services Group and shadow staff* – indicating Fresno is understaffed. Our experience shows that, in a typical municipality, from 3 - 5% of total labor effort is devoted to supporting IT. Underserved areas include:**
 - Application support:
 - With only 3.85 ISD FTEs providing support, PeopleSoft Finance and HR lack adequate resources
 - Other areas of the application portfolio need streamlining – which will require near-term investments and additional labor effort in order to decrease long-term spending
 - The addition of maintenance management and expanded e-Government capabilities will increase the application support workload
 - Fresno's pattern of falling behind in application support indicates potential understaffing
 - Project management – Lack of formal project backlog and project management structure warrant greater attention to project management responsibilities and activities
 - First-level supervision – ISD's span of control is also an issue, with a supervisory structure that creates too much responsibility for some division managers
 - Research and development – A city of Fresno's size and responsibilities requires more focus on research and development of technologies and best practices that may be suitable for the City to adopt
 - Strategic planning – Fresno lacks a strategic, citywide IT plan as well as IT plans for its departments; staffing analysis indicated that this area receives less than ¼ of an FTE labor effort

Findings: IT Service Delivery, Cont.

- ◆ **Approximately 44% of City IT labor effort occurs outside ISD** – with the exception of Communications Services, this emergence of departmental effort appears not to have happened by design
- ◆ **Citywide, at approximately 29:1, the overall ratio of servers to server support effort seems reasonable**
- ◆ **In total, data suggest room for management improvement in customer services:**
 - The City lacks a formal project backlog and associated policies
 - The trouble ticket backlog shows longer than normal response times and numerous unresolved calls
 - Interviews and focus group discussions often mentioned inadequate staffing and unclear roles and responsibilities
- ◆ **Organizationally, the City's IT resources do not appear to be optimally structured:**
 - Distribution of infrastructure support responsibilities makes standards difficult to enforce, introduces issues with both security and license management, and drives up the cost of supporting the desktop and local area network
 - Communications Services is located in the General Services Division, but supports technologies that are converging with more traditional information technologies
 - Under the current organization structure, ISD's Computer Systems Manager has a large span of supervisory control, including management of Help Desk, Network, and Data Center Operations resources
 - Separation of PeopleSoft HR and Finance supervisory responsibilities introduces inefficiencies and probably does not optimally deploy the City's PeopleTools skills

Findings: IT Service Delivery, cont.

CHAPTER

3

This page presents current IT O&M staffing levels:

- ◆ In developing the findings documented on the previous pages, we evaluated the IT staffing levels across five functional areas:
 - Customer Services — functions related to the support of the desktop environment
 - System Services — functions related to managing and maintaining hardware and network resources
 - Business Application Services — functions related to developing and maintaining software in support of City business needs
 - IT Planning — functions related to the development of long-term IT vision
 - IT Administration — functions related to the management of IT

City of Fresno Current IT O&M Staffing						
IT Functions	SD Staff	All Other Departments' IT Staff	Contracted IT Staff	Shadow Staff ¹	FTE TOTAL	Cooks ²
Customer Services	11.70	9.55	-	0.05	21.30	
Help Desk (Tier 1)	2.70	3.60	-	-	6.30	13
Desktop PC support (Tier 2)	5.95	2.95	-	-	8.90	19
Business application support	2.95	3.00	-	0.05	6.00	27
Training	0.10	-	-	-	0.10	2
System Services	11.28	9.85	-	-	21.13	
Network connectivity (WAN/LAN)	1.60	-	-	-	1.60	7
Server administration	4.10	0.60	-	-	4.70	12
Data center operations	3.00	-	-	-	3.00	3
Database administration	0.90	0.90	-	-	1.80	6
Security administration	1.68	0.25	-	-	1.93	11
Telephone systems support	-	8.00	-	-	8.00	8
Mobile computing support	-	0.10	-	-	0.10	1
Business Application Services	12.55	6.60	0.70	4.45	24.30	
Application development	0.85	0.05	0.60	0.58	2.08	15
Small application support	0.45	0.25	-	0.18	0.88	10
Requirements analysis	1.10	0.05	-	0.10	1.25	10
Website design/maintenance	0.80	-	-	0.25	1.05	5
Custom application maintenance	0.35	2.50	0.10	0.40	3.35	
SCADA	-	-	-	0.30	0.30	4
Specialized applications	0.35	2.50	0.10	0.10	3.05	11
Other	-	-	-	-	-	0
Package application maintenance	9.00	3.75	-	2.95	15.70	
Airport Management System	-	0.25	-	-	0.25	1
Fleet Anywhere	-	0.80	-	0.20	1.00	4
GIS	2.70	-	-	0.45	3.15	7
HTE Permitting	0.75	-	-	0.25	1.00	6
HTE Utility Billing	0.75	-	-	0.20	0.95	4
Maintenance management	-	-	-	0.05	0.05	1
Peoplesoft Finance	1.75	-	-	1.10	2.85	13
Peoplesoft HR	2.10	-	-	0.40	2.50	8
Public Safety CAD/RMS	-	1.30	-	0.10	1.40	5
Specialized applications	0.95	1.40	-	0.20	2.55	14
Other	-	-	-	-	-	
IT Planning	0.76	0.25	-	-	1.01	
Strategic planning	0.15	0.05	-	-	0.20	5
Research and development	0.27	0.05	-	-	0.32	4
Disaster recovery planning	0.05	0.10	-	-	0.15	2
Governance coordination	0.29	0.05	-	-	0.34	6
IT Administration	6.80	1.75	-	-	8.55	
Asset management	0.40	0.20	-	-	0.60	2
IT procurement	0.80	0.25	-	-	1.05	6
Project management	0.92	0.50	-	-	1.42	12
Standards and policies development	0.18	0.20	-	-	0.38	5
Administrative support	2.50	-	-	-	2.50	5
Departmental management	2.00	0.60	-	-	2.60	10
FTE TOTAL	43.09	28.00	0.70	4.50	76.29	

¹ "Shadow staff" refers to staff who do not hold IT job titles, but who spend 10% or more of their time performing IT function

² "Cooks" refers to the number of individuals performing the indicated function

Impacts: IT Service Delivery

CHAPTER 3

The preceding IT service delivery findings lead to a variety of impacts:

- ◆ **Poorly managed PC and desktop support have resulted in the perception that help desk operations is understaffed**
- ◆ **ISD's inability to meet the needs and demands of City staff have led to the growth of departmental IT staff**
- ◆ **Unclear roles and responsibilities between departmental IT and ISD:**
 - Hinder the coordinated effort and teamwork needed to deliver service effectively and make strategic enterprise-wide technology decisions and plans
 - Encourage diverse approaches to deploying technology, increasing support costs
- ◆ **Insufficient IT staffing in major areas (e.g., PeopleSoft support, project management, planning, etc.), spreads effort thinly across critical functions, limiting the City's ability to proactively identify and resolve technical problems and impairing effective use of the City's IT investments**
- ◆ **The organizational structure of Fresno's IT staff ultimately leads to suboptimal use of the City's IT resources – it has left some IT staff with insufficient management and caused inefficiencies in other areas (e.g., adherence to standards, division of PeopleSoft HR and Finance support, and “jack-of-all trades” issues in some departments)**
- ◆ **The separation of communication services from ISD does not position the City to take best advantage of the convergence of these technologies, specifically:**
 - The sharing of physical networks and associated support skills
 - The need to interface telephone and data systems (e.g., interactive voice response, IP phones, etc.)
 - The emergence of general purpose laptops and devices running the Microsoft operating systems as mobile devices

[IT Decision Making:]

Overview

CHAPTER 3

***IT decision making* refers to the processes and participants responsible for making IT investment decisions.**

This section presents our assessment of these processes as follows:

- ◆ Findings
- ◆ External Benchmark Findings
- ◆ Impacts

Findings: IT Decision Making

CHAPTER

3

This section summarizes PTI's IT decision-making findings:

- ◆ **The City has been hampered by a lack of IT leadership in recent years:**
 - The CIO position lacks the authority to make final IT decisions citywide or for IT oversight
 - IT direction has been inconsistent
 - Management has turned over frequently
 - Departments make IT decisions independent of other departments, including ISD
- ◆ **Despite being reasonably satisfied with IT at the City overall, customer survey respondents expressed notable dissatisfaction with the City's IT decision making, including aspects such as understanding how decisions are made and feeling represented in the process**
- ◆ **Data confirms the perception that senior management has not effectively supported ongoing investment in IT applications**
- ◆ **Fresno's IT funding suffers from relatively unusual citywide budgeting practices:**
 - The City has not traditionally capitalized IT investments that are typically capitalized in other jurisdictions (e.g., major software procurements, etc.) – instead, these costs account for a notable percentage of dollars in the City's current IT expenditures
 - Some current expenditures (e.g., equipment replacement fund dollars, etc.) that are regularly funded in most jurisdictions need to be justified every year

Findings: IT Decision Making

CHAPTER 3

- ISD appears overly dependent on budget “carryovers” to fund O&M and Systems Acquisition and Maintenance (SAM) projects – “carryover” dollars appear to be built-in to the budget planning process
- With no effective way to budget for ongoing maintenance and upgrades to the City’s IT portfolio (e.g., keeping current on PeopleSoft) the City is letting applications become out-of-date – which will ultimately require additional investment
- ◆ **The City has had difficulty selecting, implementing, deploying, and supporting software applications:**
 - Hansen purchase contract did not fully account for implementation services
 - Data 911 has taken an extraordinarily long time to implement
 - PeopleSoft has been heavily tailored and not kept current; business practices were not significantly revised during the implementation
- ◆ **While application maintenance and support are not receiving adequate investment, at 3%* of adjusted operating budget, Citywide IT spending for FY 2003 falls at the top end of the 1.5%-3% range that we typically see in municipalities:**
 - Spending at or above the upper end of this range is typical for cities that have deployed applications such as PeopleSoft

[Findings: IT Decision Making, Cont.]

CHAPTER 3

- Fresno's complicated application portfolio, non-standard infrastructure, and comparatively high (for municipalities) IT staff compensation would all tend to push Fresno toward the upper end of the spending range
- Nevertheless, with spending at this level, we would not expect to see the City with so many issues in its application portfolio – an indicator that Fresno has not been receiving the full value available from the monies expended

◆ **In Fresno's instance, comparing IT spending to other jurisdictions is complicated by the following:**

- Average IT staff compensation falls towards the higher end of the pay scale seen in many municipalities, which may increase spending without corresponding increases in labor effort or service delivered
- While the PeopleSoft lease payments have been removed, the base spending amount likely includes other investments that are typically capitalized in the municipalities from which we derived this range

[Findings: IT Decision Making, Cont.]

CHAPTER 3

- ◆ **Note that when we calculate IT spending as a percentage of total City budget, this percentage drops to approximately 2.1%. We prefer not to use figure because:**
 - The vast majority of capital dollars go to contractors and do not represent expenditures requiring support from Fresno's IT department
 - Capital budgets can vary significantly from year-to-year:
 - This makes trending difficult
 - It also makes comparisons with other jurisdictions, which may be at different points in their capital investment cycle, problematic
- ◆ **Regarding Fresno's ISF allocation of ISD costs:**
 - Some departments, particularly FPD, feel that they are overcharged under the current ISD charges methodology
 - The current methodology for allocating infrastructure and workstation costs seems reasonable – and is consistent with what we see in other jurisdictions
 - The current approach to allocating application support staff costs does not encourage judicious use of limited ISD resources (e.g. application development, etc.) – because business units do not pay for these services on an as-used basis, they have no incentive to restrict their requests

Findings:

IT Decision Making, Cont.

CHAPTER 3

- ◆ **The outsourcing controversy has significantly impacted morale at ISD**
- ◆ **Successful outsourcing of major portions of an IT function can be difficult to achieve and depends on various factors within the organization's environment – in general, organizations that are ready to outsource typically have these characteristics:**
 - **Staff are unhappy with services they are receiving** – Most employees feel that services need to be improved and will be interested in change that could result in better service. *Our survey and focus group findings at Fresno are mixed; some staff are satisfied with IT services while others feel much can be improved.*
 - **IT function is presently well-staffed** – When the current IT organization is adequately staffed, outsourcing labor resources may not result in significantly higher costs than current staffing expenditures. When the current organization is understaffed, the outsourcer may have to add labor, driving costs up. *Fresno is not adequately staffed in some IT functions, likely resulting in higher staff costs in order to be sufficiently served by an outsourcer.*
 - **Infrastructure is homogeneous** – Technical infrastructure that is largely standardized is easily transitioned to and cost effectively supported by a third party. *The City's infrastructure is comprised of various hardware and software standards and would probably require significant investment in preparation for outsourcing.*

[Findings: IT Decision Making, Cont.]

CHAPTER 3

- **Application portfolio is simple and easy to manage** – Similar to infrastructure, an application portfolio that is dependent on one or two major vendor applications for most of its functions will be easier to transition and more cost effective to support. *Fresno has a wide range of applications and standards and lacks a comprehensive inventory of its portfolio, complicating outsourcing for this area.*
- **Initiative has clear, obtainable goals** – The objectives of outsourcing need to be clearly defined and realistic, so that an organization understands what they are trying to achieve and can identify success when achieved. *PTI did not see a clear set of goals for this initiative at Fresno. Some identified cost savings as a potential outcome. In our experience, public sector outsourcing rarely results in cost savings.*
- **Management metrics are in place** – Well-designed and established performance metrics are necessary to ensure that the negotiated outsourcing agreement adheres to City standards and provides the desired customer service. *The City has put some performance measurements in place, but they have not yet been well-communicated or adequately tracked. If today's service levels lack benchmarks, it is difficult to adequately define third-party service standards.*

[Findings: IT Decision Making, Cont.]

CHAPTER 3

- **Political environment is amenable to outsourcing** – The organization's culture and appetite for outsourcing is critical; all other characteristics may be met, but a lack of cultural acceptance of outsourced service will cause the initiative to fail. *While some outsourcing efforts have already occurred elsewhere in the City, Fresno's bargaining units will complicate this issue. Also, participants in PTI's focus groups and interviews indicated a strong desire to keep IT services in-house.*
- **Organization's immediate market has adequate outsourcing options** – Even if an organization is ready to outsource, it must have the customer profile (e.g., location, size of business, etc.) desired by outsourcing vendors who can meet its requirements. *At present, the City has not researched outsourcing options enough to identify suitable, potential outsourcers.*

Findings: IT Decision Making, Cont.

CHAPTER 3

Overall, the City does not appear well-positioned for outsourcing – as the following chart illustrates.

Characteristics of “Outsourcing-Ready” Organizations	Fresno Position
Staff are unhappy with services they are receiving	●
IT function is presently well-staffed (suggesting that outsourcing resource requirements will not be greater than current resources)	○
Infrastructure is homogeneous	○
Application portfolio is simple and easy to manage	○
Initiative has clear, obtainable goals	○
Management metrics are in place	●
Political environment is amenable to outsourcing	●
Organization’s immediate market has adequate outsourcing options	unknown

Legend	
Matches characteristic	●
Partially matches characteristic	◐
Does not match characteristic	○

[Findings: IT Decision Making, Cont.]

CHAPTER 3

◆ **Fresno lacks a clear, unified direction for GIS:**

- The City's recent GIS study has done little to put structure around or provide direction to GIS at the City
- Departments, including ISD, develop layers on an as-needed, ad-hoc basis, without any citywide GIS framework

◆ **Investment priorities of the customer survey respondents came in the following order, according to average rank (on a scale from 1-lowest priority to 5-highest priority):**

- e-Government (3.3 avg.) and Mobile and Wireless (3.3 avg.)
- GIS (3.2 avg.)
- Document Management (2.9 avg.)
- Infrastructure (2.8 avg.)

◆ **Interviewees expressed a lot of dissatisfaction with the 10X process for IT-related purchases and project requests – they consider it slow, cumbersome, and difficult to work with**

Findings: External Benchmarks

CHAPTER 3

This section summarizes PTI's external survey-related findings:

- ◆ **As part of the assessment, PTI conducted a benchmarking survey of cities similar in size, services, and/or demographics:**
 - PTI contacted 11 cities, driven largely by the cities referenced in the recent study by the Mayor's Council of Economic Advisors
 - Only two responses were received, due to the tight timeframe in which the study was required to be completed
 - To supplement our findings, we have included Colorado Springs, CO, and Scottsdale, AZ, which we previously surveyed

**The following page presents our
survey results.**

Findings: External Benchmarks

CHAPTER 3

	Fresno, CA	Anaheim, CA	Bakersfield, CA	Colorado Springs, CO	Scottsdale, AZ
Financial					
All City operating funds	\$376,176,100	\$637,000,000	\$240,360,945	\$217,375,000	\$355,100,000
All IT Funds	\$11,395,057	\$6,851,000	\$4,062,524	\$10,702,131	\$11,305,448
All IT Labor	\$5,487,211	\$251,000	\$1,618,026	\$6,049,650	\$8,172,428
IT budget as percentage of total City budget	3.0%	1.1%	1.7%	4.9%	3.2%
IT staff budget as percentage of total IT budget	48.15%	3.66%	39.83%	56.53%	72.29%
IT staff budget/IT goods and services budget	93%	4%	142%	130%	261%
Staffing Ratios					
Ratio of City budget dollars to population	880	1930	946	575	1651
Ratio of City IT budget dollars to population	27	21	16	28	53
Help Desk/PC Support FTEs	15.20	8.00	9.00	11.00	11.72
Ratio of workstations to Help Desk/Support FTEs	137	214	67	141	251
IT FTEs as a percentage of total City FTEs	1.9%	1.4%	1.4%	3.2%	5.8%
IT FTEs as percentage of City PCs	3.4%	2.0%	3.3%	4.7%	4.1%

- ◆ **At 27:1, PTI's calculated ratio of IT budget to population for Fresno, differs slightly from the 30:1 figure provided in the Mayor's Council of Economic Advisors' January 1, 2003 report. In PTI's figure, we have:**
 - Removed from operating dollars costs that most jurisdictions capitalize (e.g., PeopleSoft lease, etc.)
 - Removed nearly \$1.5 million from the FY2003 ISD budget as these dollars are in reserve for the Police Department in anticipation of receiving a grant in that amount. This money will not be spent by ISD in 2003 and will not appear in the FY 2004 budget.

Findings:

External Benchmarks, cont.

CHAPTER 3

- ◆ **Compared to Anaheim and Bakersfield in this external survey, Fresno allocated a higher percentage of current expenditures toward IT – however, various attributes of those cities are distinctly different from Fresno and make it difficult to analyze results conclusively**
- ◆ **The City of Anaheim differed from Fresno in areas of significant impact to IT funds:**
 - Anaheim outsources its IT function, invalidating labor effort comparisons
 - Anaheim's core finance and human resource applications are over 20 years old and will lose vendor support shortly – Anaheim recognizes that its IT expenditures will likely increase considerably when this system is replaced
- ◆ **Bakersfield also had various characteristics that made this responding city less suitable for comparison with Fresno:**
 - Bakersfield maintains a relatively homogeneous application portfolio, depending on a single Tier 2* application (HTE) for most major automation – a low cost strategy
 - Despite this, on a percentage basis, they devote almost as much labor to IT as Fresno does – and Fresno has a much more demanding application portfolio
- ◆ **Like most jurisdictions, participating cities likely pay for major IT acquisitions through capital funds – another factor that complicates comparisons**

Findings: External Benchmarks

CHAPTER 3

- ◆ As a means of providing additional data points, we used data underlying the report from the Mayor's Council of Economic Advisors on IT expenditure findings to calculate the following peer comparisons:

	FRESNO	OAKLAND	BAKERSFIELD	STOCKTON	SAN DIEGO	LONG BEACH	SACRAMENTO
IT Expenditures as % of Citywide	2.0%	1.4%	1.7%	3.5%	0.5%	3.0%	1.9%

- ◆ In interpreting these figures, it is important to note:
 - San Diego, which outsources its IT, did not include its outsourcing costs in the numbers used in the calculation above
 - Fresno's IT spending in the table above varies from PTI's analysis for two primary reasons:
 - PTI's Citywide expenditure figure removed capital expenditures from the enterprise departments and all debt service and interdepartmental transfers from the total operating expenditures (the Mayor's Council report did not appear to adjust these numbers)
 - PTI's IT expenditure figure included some spending outside of ISD which the Mayor's Council report did not

Impacts: Decision Making

CHAPTER 3

The preceding IT decision-making findings lead to a variety of impacts:

- ◆ The City's troubles with IT leadership over the past several years have undermined the credibility of the role and resulted in the loss of trust among staff in the City's IT direction and initiatives
- ◆ Fresno's inability to adequately fund ongoing maintenance and upgrades to its IT portfolio allows its applications and infrastructure to become outdated, and will also make it expensive for the City to catch up
- ◆ Overall spending at the top of the expected range combined with underinvestment in applications may indicate inefficiencies in some areas of IT at the City
- ◆ The City's practice of not capitalizing major IT investments has made it challenging for Fresno to obtain funds for critical IT projects (e.g., PeopleSoft upgrade, etc.) and also makes major applications expensive for the business units by driving up chargebacks
- ◆ Poor selection, decision-making, and implementation processes have left major functional areas under-automated (e.g., fire, maintenance management, etc.)
- ◆ The continued threat of outsourcing distracts the City's overall focus on IT issues and hampers City staff's ability to think long-term about IT initiatives
- ◆ Lack of City action on prior IT studies has left staff disillusioned with advice from outside IT consultants

Technical Infrastructure: Overview

CHAPTER 3

Technical Infrastructure refers to the hardware, networks, databases, operating systems, and security that support the applications.

This section presents PTI's assessment results regarding the City's technical infrastructure as follows:

- ◆ Findings
- ◆ Impacts

Findings: Technical Infrastructure

CHAPTER 3

This section summarizes PTI's technical infrastructure findings:

- ◆ Core applications are largely standardized on Oracle DBMS
- ◆ Fresno lacks a clear understanding of existing IT assets, particularly desktop hardware and software licensing
- ◆ The City's workstations do not follow a single standard – they are comprised of various hardware configurations and operating systems
- ◆ Servers outside the ISD and PD data centers may not be appropriately secured and maintained
- ◆ The City relies on some significantly outdated technologies (e.g., FoxPro, Pick, etc.)
- ◆ Until recently, the City was still building its servers, contrary to best practices – current management has since ended this
- ◆ Ancillary applications use a wide variety of development tools and databases (e.g., MS Access, Paradox, etc.)

Findings: Technical Infrastructure

CHAPTER 3

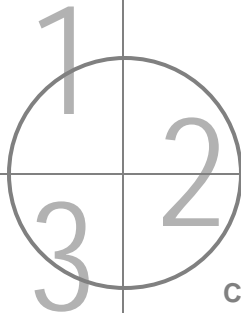
- ◆ **Problems exist with City Hall wiring – the building was wired for a different LAN architecture than the City is now using; the City currently has a project underway to upgrade the wiring in 1-2 years**
- ◆ **Remote connectivity has improved over last several years, but may still be too slow and unreliable at some sites:**
 - In particular, remote users continue to experience issues logging in and connecting to the network
 - The customer survey found no significant satisfaction difference between remote sites and City Hall

Impacts: Technical Infrastructure

The preceding technical infrastructure findings lead to a variety of impacts:

- ◆ The City's lack of a thorough technical inventory, particularly around desktop hardware and software licensing, hinders its ability to efficiently manage and utilize its IT resources
- ◆ Distribution of servers outside of ISD and PD data centers makes servers more difficult to maintain and security more difficult to provide
- ◆ The continued use of outdated technologies and reliance on a wide variety of development tools at the City may pose challenges for integration of systems and upgrades to current software
- ◆ Problems with City Hall wiring has likely caused some unstable connections for users and will continue to do so until impending wiring upgrade is complete
- ◆ Lack of enforced configuration standards for workstations increases operating costs and complicates security

Assessment



Comparative
Analysis

Solution
Recommendations

recommendations

[Recommendations:]

Overview

CHAPTER 4

- ◆ **The preceding findings led to the strategic recommendations detailed in this chapter. It presents:**
 - **Key Recommendations** – *Recommendations that are critical to the City's ability to move forward effectively with IT*
 - **Additional Suggestions** – *Important recommendations for the City to undertake to improve IT applications and operations at the City, but which are not as central to Fresno's IT capabilities as the key recommendations:*
 - Suggested Application Approach
 - Suggested IT Organization and Service Delivery Approach
 - Suggested IT Decision-Making Approach
 - Suggested Technical Infrastructure Approach
 - **Benefits**

[Key Recommendations]

CHAPTER

4

The following pages present PTI's major recommendations:

◆ Chart a clear path for Fresno's application portfolio*:

- Identify areas for potential application investment and prioritize, at a citywide level, those applications, including:
 - Maintenance management
 - e-Government
 - GIS
- Simplify the City's application portfolio, eliminating redundant and marginal applications, with an emphasis on better utilizing the City's major packages
- Pick, implement, and support a single version of a single personal productivity suite to eliminate redundant functionality, minimize support requirements, and enhance file sharing between staff

[Key Recommendations]

CHAPTER

4

◆ Make a decision regarding PeopleSoft:

- Commit resources necessary to effectively support PeopleSoft – this would need to include:
 - Examining a potential reimplementation (e.g., re-tailoring the application to better meet business processes, etc.)
 - Reengineering business processes to take full advantage of the system's capabilities
 - Funding the necessary support positions
- If sufficient resources cannot be committed to PeopleSoft, move to a Tier 2 application that will have reduced support and funding requirements

◆ Address CAD/RMS application situation:

- Determine status of existing efforts for Police and Fire
- Develop complete application architectures for Police and Fire
- Determine how well the Data 911 application fits this architecture
- In light of the information gathered above, determine the best course of action

[Key Recommendations]

CHAPTER 4

◆ Do not pursue large-scale outsourcing at this time:

- The City must bring closure to this controversy in order to move forward
- As PTI found Fresno ill-positioned to pursue large-scale outsourcing, the City should focus efforts on gaining better control of its infrastructure, applications, and IT management approach before considering outsourcing
- To better clarify the issue, the City might benefit from conducting a formal cost benefit analysis to establish costs and potential benefits associated with different outsourcing scenarios
- After addressing infrastructure, control and management, and application issues, the City may consider exploring outsourcing *select* areas of IT functions where viable markets likely exist and where either cost savings or service delivery improvements might be realized, including:
 - Help desk support
 - PC maintenance
 - Application hosting
 - Network management
 - Web hosting

[Key Recommendations]

CHAPTER 4

◆ Reorganize aspects of IT service delivery:

- Consolidate Citywide IT infrastructure responsibilities in ISD:
 - Move support for FPD infrastructure under ISD
 - Move the Communications Division under ISD
- Over time, give the departments greater responsibility for business application support:
 - Responsibility for cross-departmental applications can rest with a single designated department or with ISD
 - Departments can contract with ISD to support their applications if desired
 - This shift should not occur until after the City has addressed other issues with its applications portfolio

◆ Adjust IT staffing levels:

- After the City formally identifies and prioritizes its applications needs, it will need to staff accordingly – both short term and long term – to support those needs
- Existing areas of application support may warrant additional resources, especially PeopleSoft and possibly Data911
- Increase resources devoted to IT in the areas of planning, project management, and research and development

◆ Adjust the chargeback methodology:

- Charge a mandatory baseline fee to keep applications (including major, specialized, and “small” applications) current and functioning
- Charge additional application support on an actual use basis – assuming mechanisms to track this are in place and the City trusts the data (otherwise, base on a budgeted workplan)
- Develop annual workplans between ISD and business units
- Keep network and desktop charge backs “as is”

[Key Recommendations]

CHAPTER

4

◆ **Change IT funding models:**

- Avoid the use of current expenditure funds for major IT investments
- Implement a replacement fund for investments that are numerous, regular, but relatively small (e.g., PC's, networking systems, etc.)

◆ **Complete an overall IT strategic plan:**

- Develop citywide IT vision and goals
- Inventory applications and assess application priorities
- Establish decision-making processes
- Identify, cost, and schedule projects in the areas of service delivery, governance, application, and technical infrastructure (projects additional to those presented later in this document)

◆ **Develop departmental IT plans, scaled commensurately with department needs (e.g., Utilities and Police may need more comprehensive plans)**

[Key Recommendations]

CHAPTER

4

◆ Establish a true CIO position and an associated governance structure:

- Empower the role with citywide, final IT decision-making authority – as is common with CIO positions in other jurisdictions
- Establish an assistant director position that has day-to-day operational responsibility for ISD (Pages 4-13 thru 4-15 provide additional detail)
- This is a critical step for the future of the City, providing a single point of IT responsibility for addressing existing problems and positioning the City for continued growth
- An associated governance structure would include processes for cross-organizational participation and decision-making as well as governing boards (which may include outside directors) to advise the CIO

Additional Suggestions: Applications

CHAPTER

4

This section presents PTI's additional application suggestions:

- ◆ **Develop a common, realistic vision for GIS maintenance, development, and use at the City in order to minimize redundant data and leverage citywide layers:**
 - Assign ownership of base layers to a single resource (in ISD or to a major user)
 - Require all departments to use shared base layers as necessary and develop their own layers as desired
- ◆ **Ensure that the City keeps current with patches, upgrades, etc. from all vendor applications in order to maximize benefit from software functionality and avoid larger upgrade costs in the future**
- ◆ **Inventory existing applications, uses, support requirements, etc. across the enterprise – and establish policies and procedures for maintaining this information**
- ◆ **Stay with GroupWise for now, as other initiatives have higher priority – explore options in the future when more critical projects are completed**
- ◆ **As the City prioritizes its application investments, explore replacements for the City's Airport Management System (AMS), a relatively old application based on outdated technology**

Additional Suggestions: IT Organization and Service Delivery

CHAPTER

4

This section presents PTI's additional IT organization and service delivery suggestions:

- ◆ **Once the application environment has been rationalized and standards are in place, assign ongoing application responsibilities as appropriate:**
 - Applications can be supported by either ISD or departments
 - For cross-department applications, if departments cannot agree on support, ISD will have responsibility
 - ISD still maintains servers and databases
- ◆ **Buy and implement help desk software with an effective knowledge base**
- ◆ **Reduce project and help desk backlogs and implement controls to ensure that work backlogs are effectively managed**
- ◆ **Develop a more effective project initiation, prioritization, and tracking mechanism**
- ◆ **Streamline the 10X process**
- ◆ **Develop a process for reviewing application development requests that:**
 - Verifies that an existing package cannot meet the need before funding a new project
 - Ensures appropriate tools and methodology are used

Additional Suggestions: IT Organization and Service Delivery, cont.

CHAPTER

4

- ◆ Develop policies and procedures and standards to support the new service delivery model
- ◆ Assign IT roles and responsibilities between ISD and departments as follows:

Major ISD Roles and Responsibilities

- ◆ Establish, enforce, and maintain citywide standards and policies
- ◆ Provide citywide help desk for workstation and desktop application support
- ◆ Maintain and run enterprise applications,
- ◆ Maintain and run computer rooms, servers, network infrastructure, and databases
- ◆ Provide oversight, including project management assistance, on major IT projects across the City
- ◆ Participate in major departmental IT projects and staff hiring as an advisor
- ◆ Provide citywide vision for IT
- ◆ Ensure IT staff resources are adequately trained to meet City needs
- ◆ Maintain relationships with technology vendors
- ◆ Attend internal user groups
- ◆ Maintain central repository of maintenance and license agreements
- ◆ Participate in RFP development and vendor selection for business applications
- ◆ Set overarching security practices
- ◆ Ensure network, operating system, and database security, including disaster recovery capabilities and protection from unauthorized access and viruses

Additional Suggestions:

IT Organization and Service Delivery, cont.

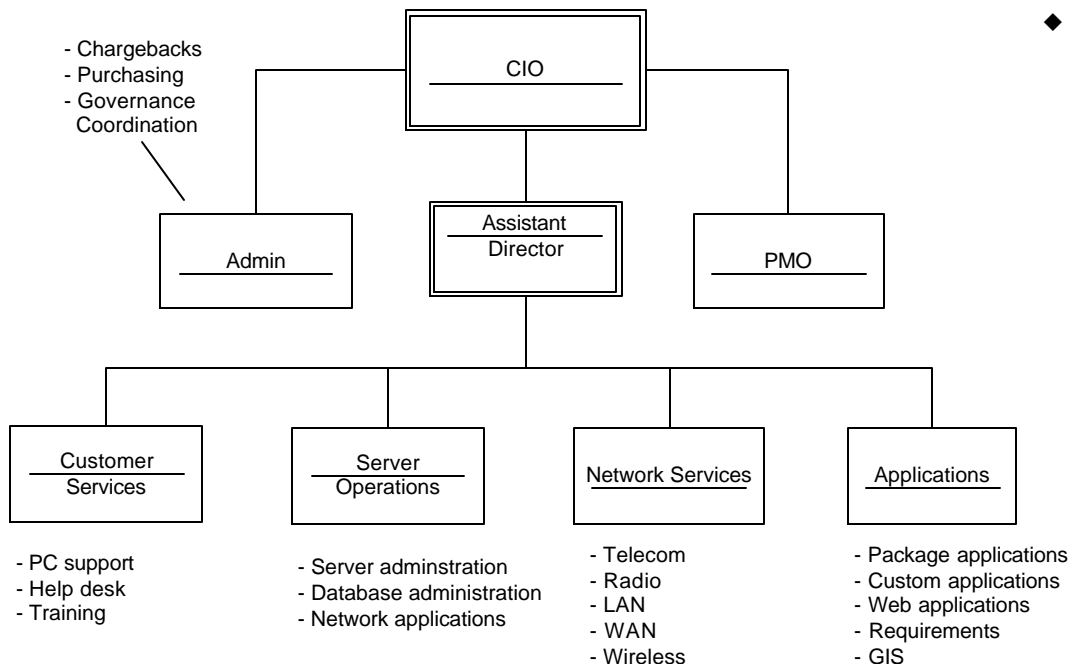
Major Departmental Roles and Responsibilities:

- ◆ Support and administer all business-specific applications
- ◆ Hire, train, and manage departmental IT application staff
- ◆ Participate in establishing citywide standards and a citywide vision for IT
- ◆ Establish a departmentally focused IT vision
- ◆ Maintain business-specific control systems and technologies (e.g., SCADA, Intelligent Transit Systems, etc.)
- ◆ Provide input on citywide standards and policies
- ◆ Maintain compliance with citywide standards and policies
- ◆ Administer applications
- ◆ Chair internal user groups
- ◆ Attend user conferences, maintaining awareness of new application releases
- ◆ Lead RFP development and vendor selection for business applications
- ◆ Ensure security of departmentally supported applications
- ◆ Enforce security and use policies
- ◆ Ensure compliance with personal computing security requirements, including physical security and virus protection standards

Additional Suggestions: IT Organization and Service Delivery, cont.

CHAPTER 4

The following pages present recommended roles and responsibilities associated with the City's IT organization structure and service delivery:



◆ CIO:

- Has oversight responsibility and final decision-making authority for all IT projects at the City
- Manages ISD
- Can assume management over any department IT operations or projects deemed problematic
- Performs departmental and strategic IT planning
- Communicates with other department heads
- Manages budget and assets
- Champions major IT projects
- Establishes tone and culture for customer-service oriented group
- Sets direction for research and development
- Develops and enforces IT decision-making and procurement processes
- Leads development of other necessary policies and procedures

Additional Suggestions: IT Organization and Service Delivery, cont.

CHAPTER

4

◆ Assistant Director:

- Oversees day-to-day operations of customer service, server operations, network services, applications
- Assists in departmental and strategic IT planning
- Assists in communication with other department heads
- Assists in setting direction for research and development
- Coordinates City IT security efforts

◆ Administrative Services:

- Tracks chargebacks
- Manages procurement processes
- Coordinates governance
- Manages development of necessary policies and procedures
- Assists in management of budget and assets
- Assists with policy and procedure development

◆ PMO:

- Manages major IT projects throughout the City
- Establishes project management methodology and mechanisms
- Facilitates prioritization of IT projects
- Tracks and monitors all significant IT projects
- Assigns resources to projects
- Monitors project staff utilization

◆ Customer Services Manager:

- Manages PC support
- Develops and maintains help desk policies and procedures
- Sets and tracks service delivery metrics
- Leads related research and development
- Maintains related vendor relationships
- Leads customer service oriented culture

Additional Suggestions: IT Organization and Service Delivery, cont.

CHAPTER 4

◆ Server Operations Manager:

- Manages database, network applications, and server support
- Responsible for operations security
- Manages data center
- Leads related research and development
- Maintains related vendor relationships
- Leads customer service oriented culture
- Responsible for server security

◆ Network Services Manager:

- Supervises network, radio, and telecommunications resources
- Heads network design and planning activities
- Leads related research and development
- Maintains related vendor relationships
- Leads customer service oriented culture
- Responsible for network security

◆ Applications Manager:

- Manages the overall application portfolio
- Supervises application services staff
- Manages package, custom, GIS, and Web application projects
- Creates overall applications workplan
- Assists in application planning and prioritization
- Assists in software standards development
- Provides feedback in application procurement efforts
- Leads related research and development
- Maintains related vendor relationships
- Leads customer service oriented culture
- Responsible for applications security in applications supported by ISD

Additional Suggestions: Decision Making

CHAPTER 4

This section presents PTI's additional IT decision-making suggestions:

- ◆ **Develop and implement an overall approach for managing the technology life cycle – from selection to support – that:**
 - Addresses contract issues early on
 - Accounts for implementation, maintenance and support requirements
 - Utilizes skilled IT project management
 - Identifies success measures
 - Provides consistent, apples-to-apples comparisons
 - Clearly defines and tracks budget/actuals information
 - Involves user input at appropriate points throughout the process
 - Addresses project startup, training, testing, acceptance and post-implementation review

Additional Suggestions: Technical Infrastructure

CHAPTER

4

This section presents PTI's additional technical infrastructure suggestions:

- ◆ As the City moves forward with cable franchise agreement negotiations, explore benefits and capabilities associated with an I-Net*, which may offer cost savings and better access for the City
- ◆ Upgrade City Hall wiring to Cat 5e to improve network reliability within the building
- ◆ Continue efforts to link remote sites via fiber to enhance connectivity from these areas
- ◆ Begin unifying development environments – especially those that support departmental applications
- ◆ Continue the trend toward vended hardware (versus “self built”) to minimize maintenance and support effort
- ◆ Improve facilities and management for ‘remote’ servers (e.g., servers outside of the ISD or Police computer rooms) – consolidating and moving them to a computer room as connectivity allows and better securing them when not able to relocate
- ◆ Implement a standardized desktop to streamline maintenance and ensure system compatibility
- ◆ Examine connectivity concerns of remote sites to determine cause of difficulties cited by users
- ◆ Improve inventory information and license management in order track assets and maintenance requirements
- ◆ Develop a security IT committee and associated governance to coordinate the City's technology security efforts

Benefits

CHAPTER

4

By implementing our major recommendations, the City will realize the following key benefits:

◆ **Progress within Fresno's application portfolio, including:**

- A clear, communicated plan for Fresno's e-Government direction
- Improved automation for the City's business functions
- Formal plans for other major application investments
- A simplified, more cost-effective overall application portfolio
- A course of action to address the Data911 implementation
- A well supported and implemented financial management and HR application

◆ **Improvements in IT service delivery, including:**

- A structure that positions Fresno for future growth and supports a focus on cost-effectiveness
- IT leadership with the authority to decide IT issues and oversee IT initiatives citywide
- Better management and utilization of help desk resources
- Clear roles and responsibilities for IT staff and customers
- Improved security and reduced workstation and server support costs
- Application support staffing levels matched to need and workload
- Improved security and reduced workstation and server support costs

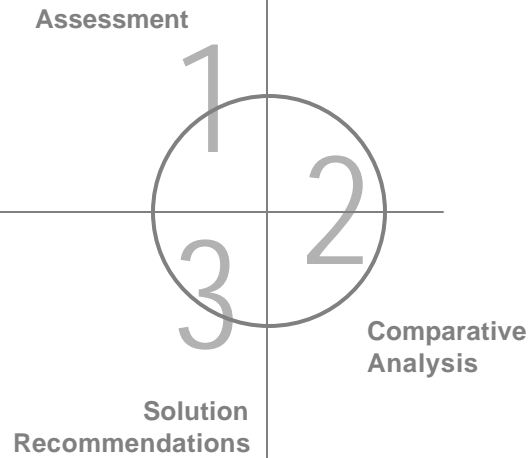
Benefits (cont.)

CHAPTER

4

- ◆ **Significant enhancements to IT decision making, including:**
 - A clear roadmap for IT, both citywide and departmentally
 - Ability to adequately fund IT maintenance and upgrade projects
 - Being better positioned to fund major projects (e.g., maintenance management systems, GIS, etc.) through appropriate funding mechanism (e.g., capital funding)
 - A charges methodology that motivates judicious use of application support services

CHAPTER 5



projects

Projects: Overview

CHAPTER

5

Based on the strategic direction described in Chapter 4, PTI developed a series of key projects aimed at improving Fresno's major software applications, IT service delivery, IT leadership, and IT decision making.

This chapter outlines the projects, costs, and attendant schedule necessary to implement the plan's major recommendations. It presents:

- ◆ Estimated Project Costs (Appendix C contains project cost assumptions)
- ◆ Planning Project Summaries
- ◆ Capital Project Summaries
- ◆ Recommended Project Schedule

Note: The list of projects in this chapter is not all encompassing – additional projects (and significant additional investment demands) will likely result from the completion of the City's IT strategic plan

Projects: Estimated Project Costs

CHAPTER

5

This section presents costs and assumptions for the recommended projects:

- ◆ PTI identified several projects to address the issues and recommendations presented in the previous chapters
- ◆ Projects are divided into two categories:
 - **Planning projects** – Activities related to management, staffing, and decision making
 - **Capital projects** – Activities related to major investments in applications and systems
- ◆ Note that costs for most capital projects are contingent on the outcomes of related planning projects (e.g., final costs for C5 Implement GIS Plan depends on the outcome of project P7 Update Strategic GIS Plan, etc.) – accordingly the cost estimates for the capital projects are provided in broad ranges
- ◆ The table on the following page lists our recommended projects and presents the estimated range of one-time costs

Note: PTI's scope of work did not allow for prioritization of application investments – additional application projects will likely be added after the City completes its IT strategic plan

Projects: Estimated Project Costs

CHAPTER

5

This section presents costs and assumptions for the recommended projects:

- ◆ The table to the right lists our recommended projects and presents one-time cost estimates
- ◆ Costs may include funds which have already been budgeted
- ◆ Costs presented do not include internal labor – which will be noteworthy for some projects
- ◆ Project P4 does not include the cost of new staff
- ◆ Project P5 assumes that tracking mechanisms are in place to charge use fees for services

Planning Projects	One-Time Costs	
	Lower	Upper
P1 Complete strategic planning processes	\$ 153,525	\$ 511,750
P2 Enhance CIO responsibilities	\$ 8,625	\$ 28,750
P3 Create decision-making and governance structures to support codified responsibilities	\$ 10,350	\$ 34,500
P4 Implement organization and staffing recommendations	\$ 10,350	\$ 34,500
P5 Implement funding recommendations	\$ 10,350	\$ 34,500
P6 Conduct Data911 project review and strategy development	\$ 13,800	\$ 46,000
P7 Update strategic GIS plan	\$ 29,325	\$ 97,750
P8 Develop e-Government plan	\$ 15,094	\$ 50,313
P9 Determine future FMS/HRMS direction	\$ 15,094	\$ 50,313
Planning Projects Subtotal	\$ 266,513	\$ 888,376
Capital Projects		
C1 Upgrade PeopleSoft	\$ 1,380,000	\$ 3,450,000
C2 Standardize computing environments	\$ 598,050	\$ 1,244,500
C3 Complete public safety CAD/RMS	\$ 603,750	\$ 5,100,000
C4 Implement e-Government plan	\$ 125,000	\$ 2,500,000
C5 Implement GIS plan	\$ 600,000	\$ 1,262,500
C6 Procure and implement maintenance management	\$ 1,250,000	\$ 3,500,000
Capital Projects Subtotal	\$ 4,556,800	\$ 17,057,000
Total - All Projects	\$ 4,823,313	\$ 17,945,376

Note: Capital project costs are gross estimates only, and will ultimately be predicated on the outcomes of associated planning projects. Appendix C contains project cost assumptions.

Projects:

Planning Project Summaries

CHAPTER

5

This section presents descriptions for each recommended planning project:

- ◆ **P1. Complete strategic planning processes** – Finishes the City-wide strategic IT plan, including developing a goal state, prioritizing application investments, and establishing IT decision-making processes. Develops comprehensive, departmental IT plans for Police, Utilities, and Public Works and less, extensive strategic plans for other smaller departments on as-needed basis. PTI anticipates this effort will identify significant additional IT projects for the City.
- ◆ **P2. Enhance CIO responsibilities** – Elevates the current CIO position to a ‘true’ CIO role with City-wide IT oversight responsibilities and final IT decision-making authority. Activities include developing and chartering job responsibilities, policies and procedures, and enforcement capabilities.
- ◆ **P3. Create decision-making and governance structures to support codified responsibilities** – Develops the decision-making models and associated governing bodies (e.g. IT steering committee, etc.) to support the CIO in reviewing and deciding on IT matters at the City.
- ◆ **P4. Implement organization and staffing recommendations** – Follows through with the resource and reorganization recommendations made in Chapter 4, including centralizing of help desk and core infrastructure support functions, bringing communications under ISD, bolstering application support staff, and redefining roles and responsibilities between both ISD and departments and within ISD, where applicable.
- ◆ **P5. Implement funding recommendations** – Executes PTI’s suggested changes to the City’s funding practices (e.g. using capital funding for major projects, funding ongoing support, establishing applications and hardware replacement funding, charging usage fees for application services, etc.).

Projects: Planning Project Summaries, cont.

CHAPTER

5

- ◆ **P6. Conduct Data 911 project review and strategy development** – Conducts a thorough analysis of the Data 911 project and develops a course of action going forward. Activities include conducting interviews, inventorying existing applications, identifying functional needs, assessing implementation progress and approach, and recommending steps necessary to ensure that the City's need for an effective CAD/RMS application is met.
- ◆ **P7. Update strategic GIS plan** – Building on work already done to address GIS needs, and taking into account progress on the existing plan, this project develops an executable, broadly supported GIS plan.
- ◆ **P8. Develop e-Government plan** – This project reviews the City's e-Government efforts and directions to date. The focus of this analysis is the review of application and development priorities in light of current City goals. Building on that prioritization review, the plan will formally document the City's future e-Government direction and establish a workplan for current and future activities, including improving online communications and cross-jurisdictional efforts.
- ◆ **P9. Determine future FMS/HRMS direction**
 - This project calls for the City to conduct an evaluation of available options for its finance and HR applications, including replacement with a lower cost but less functional solution, re-implementation, and simply upgrading. The analysis must account for both costs as well as soft benefits.

Projects: Capital Project Summaries

CHAPTER 5

This section presents descriptions for each recommended planning project:

- ◆ **C1. Upgrade PeopleSoft** – This project implements a current version of PeopleSoft. Cost estimates are driven by the final scope of activities. Minimal scope entails upgrading with little or no change to business processes. High end cost estimate assumes a re-implementation, including reengineering existing business processes to take greater advantage of PeopleSoft functionality.
- ◆ **C2. Standardize computing environments** – For the desktop, this effort creates a standard that identifies minimum hardware and a single operating system version, along with a single personal productivity application suite and version, then implements this standard across the City. This project also calls for getting control over the City's license management practices. In the application arena, this project calls for simplifying the application portfolio by eliminating redundant applications (i.e., multiple applications that support the same business function). This effort should show a strong preference for using the City's existing major applications in lieu of custom software. This project also asks the City to standardize on a single product for development of small applications (e.g., MS Access, etc.)
- ◆ **C3. Complete public safety CAD/RMS** – This project calls for the City to implement an effective CAD/RMS solution for public safety, taking into account information gathered and lessons learned in project P6. At a minimum, the project would entail completing the Data 911 implementation – including efforts necessary to address Fire concerns. Other alternatives would include completing Data 911 for Police and dispatch, and identifying a new solution for Fire RMS or procuring and implementing a single new vendor supplied solution.
- ◆ **C4. Implement e-Government plan** – This project calls for the City to act on the strategic direction for e-Government developed in task P8. This effort will likely include developing cross-jurisdictional applications for common services and providing more and better avenues for communication between the City, the Council, and their constituents. This project will also require backend systems updates to facilitate better integration and reduce or eliminate manual processing of Web transactions

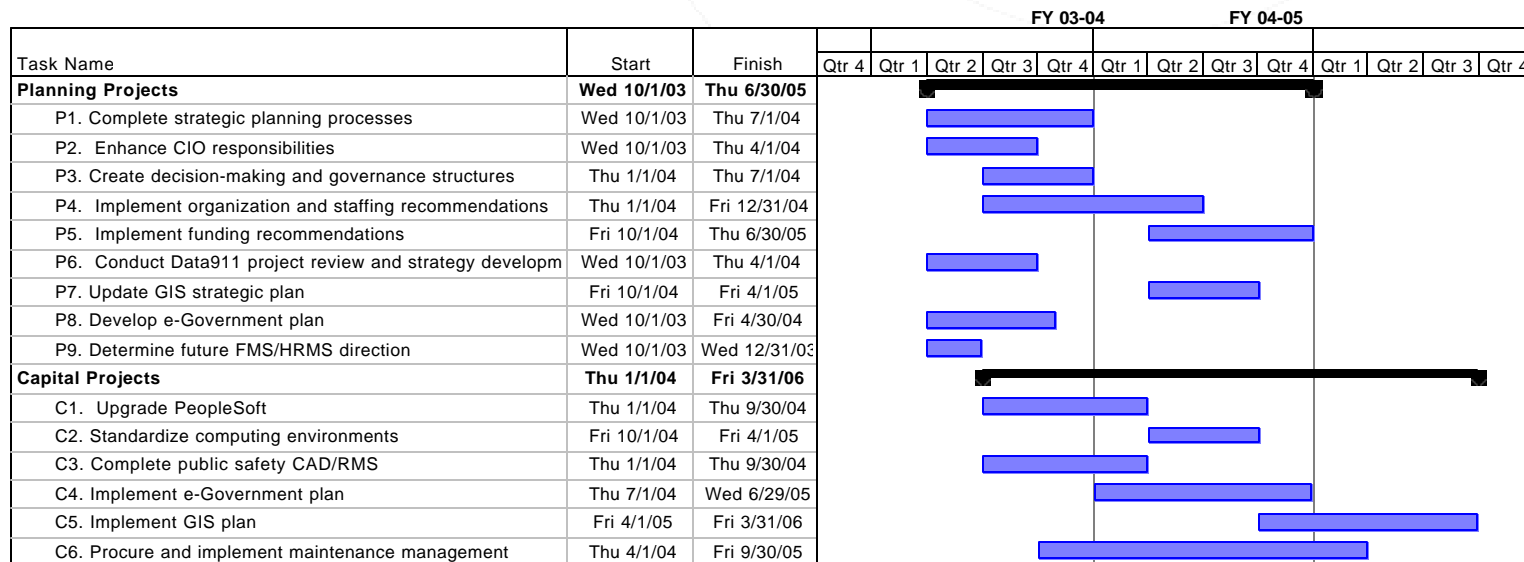
Projects: Capital Project Summaries, cont.

CHAPTER 5

- ◆ **C5. Implement GIS plan** – This project implements the strategic GIS direction developed as part of task P7. Likely project components will include developing a single base-layer of data for the entire City, rolling out a single GIS tool across the City, and developing and implementing governance structures, policies, and procedures necessary to keep the base-layer up-to-date and minimize redundancy. This project will also likely involve developing GIS-based applications, integrating existing applications with the GIS systems, and enhancing GIS functionality available via the Web.
- ◆ **C6. Procure and implement maintenance management** – Completes a procurement of appropriate software that can automate citywide maintenance and work management efforts, then implements that software. This project would likely leverage work already completed involving Hansen. The ultimate implementation should automate work order scheduling, preventative and regular maintenance, warehouse and materials management and inventory control, and associated performance monitoring and reporting.

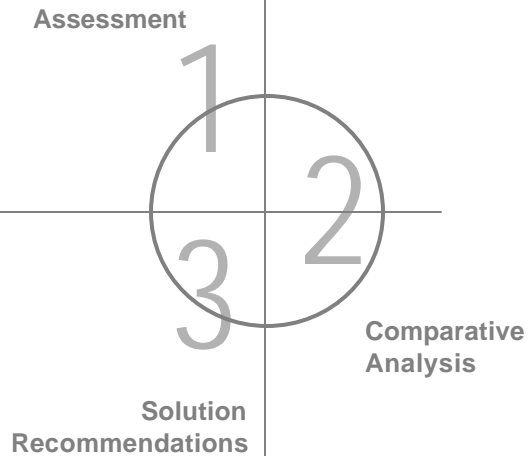
Projects: Recommended Project Schedule

- ◆ The Gantt chart presented to the right displays the recommended timeline for the projects
- ◆ The City will need to review and make adjustments to the timeline over the planning horizon based on resource constraints and changing business needs and plans – particularly for the capital projects



APPENDIX

A



**customer satisfaction
survey**

Customer Satisfaction Survey:

Summary of Findings

APPENDIX

A

As part of the assessment, Pacific Technologies conducted a City-wide survey of employees regarding their satisfaction with IT decision making, applications, IT service delivery, and technical infrastructure. Managers and staff completed a total of 540 surveys. The survey asked City staff to rank their level of agreement with 53 positively-worded statements on a scale of 1 (strongly disagree) through 7 (strongly agree).

- ◆ **Various governance and administration departments returned only a few surveys – to maintain confidentiality and draw more meaningful conclusions across the organization, we combined responses from the City Attorney’s Office, City Clerk’s Office, City Council, City Manager’s Office, and the Mayor’s Office into a single, larger group called Governance and Administration**
- ◆ **The overall average customer satisfaction score was 4.5 out of 7**
- ◆ **Average scores for Service Delivery and Applications were the highest (4.9) of the four IT planning dimensions; lowest average scores (3.3 overall) were received in the Decision Making area – a typical response**
- ◆ **Satisfaction levels were virtually the same between City staff (4.5 overall) and managers (4.6 overall)**

Customer Satisfaction Survey: Sample of Survey Comments

APPENDIX

A

In addition to the scored responses, survey respondents also provided free-form comments on the services they receive and the applications they use. The following presents some representative examples:

- ◆ “Staff is very knowledgeable. . . however their response time to a service call is slow.”
- ◆ “(ISD) staff is doing well with what they have.”
- ◆ “IT is only as good as an agency’s willingness to fund it.”
- ◆ “The (ISD) staff are helpful, but overworked. . .”
- ◆ “Please keep WordPerfect rather than switching to Microsoft Office. It is not as user-friendly.”
- ◆ “I hope the City will consider standardizing word processing to Microsoft Word. . .”
- ◆ “(IT) staff need to have the opportunity to attend specialized IT training – you can’t. . . fix what you don’t know.”
- ◆ “More training on a regular basis for software is needed.”
- ◆ “There is a serious lack of leadership, communication, and cooperation both within the IT department and throughout the entire City.”
- ◆ “(IT) management has been making poor decisions for several years.”
- ◆ “Network instability causes too much downtime and loss of data.”
- ◆ “IT does not receive the support it needs from city management and does not have a unified vision for the use of technology.”
- ◆ “Privatization of ISD is a very bad idea.”

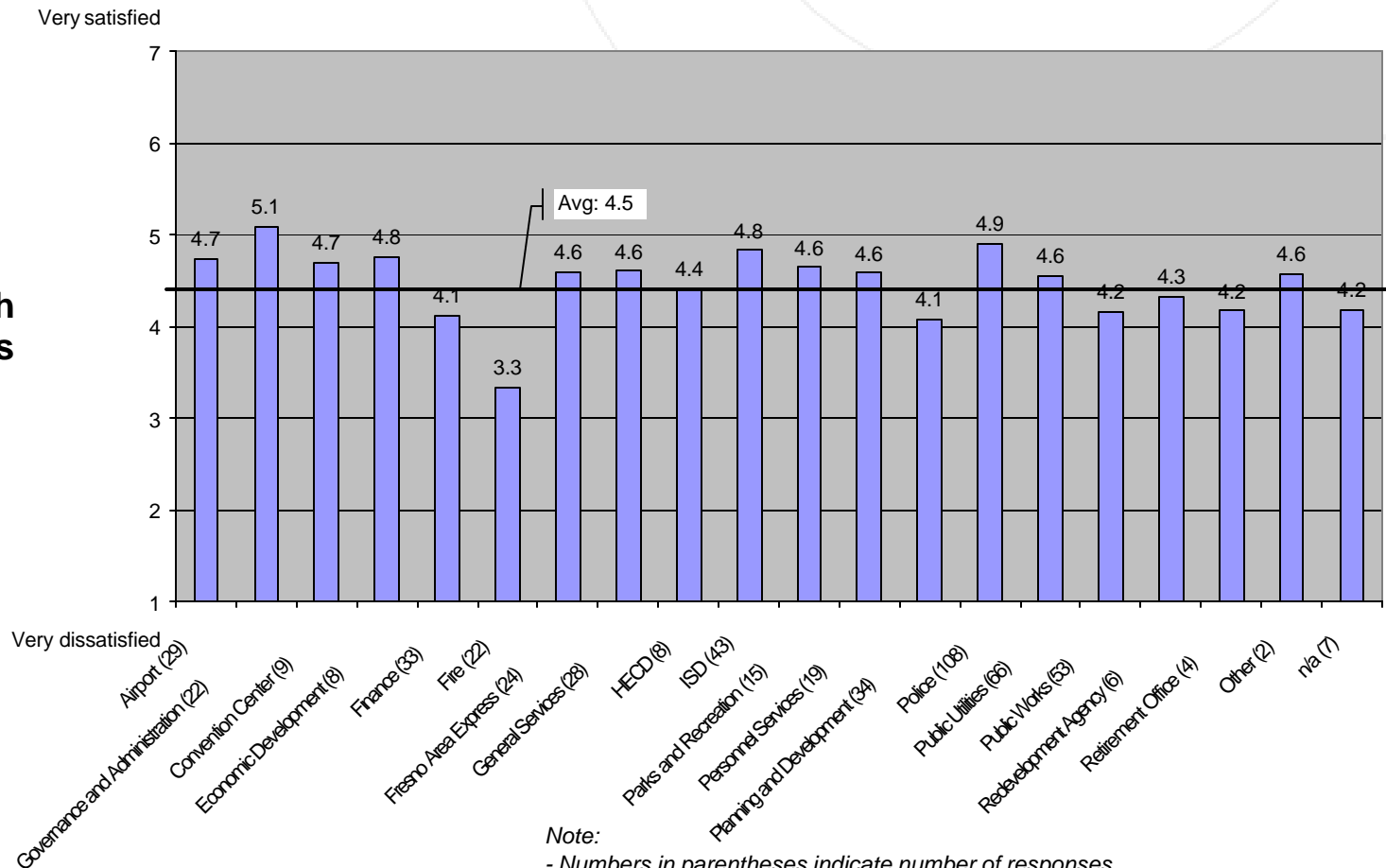
Graphs presenting survey data follow. The list of survey questions is provided at the end of this appendix.

Average Score: by Department

APPENDIX

A

IT Satisfaction by Department



Note:

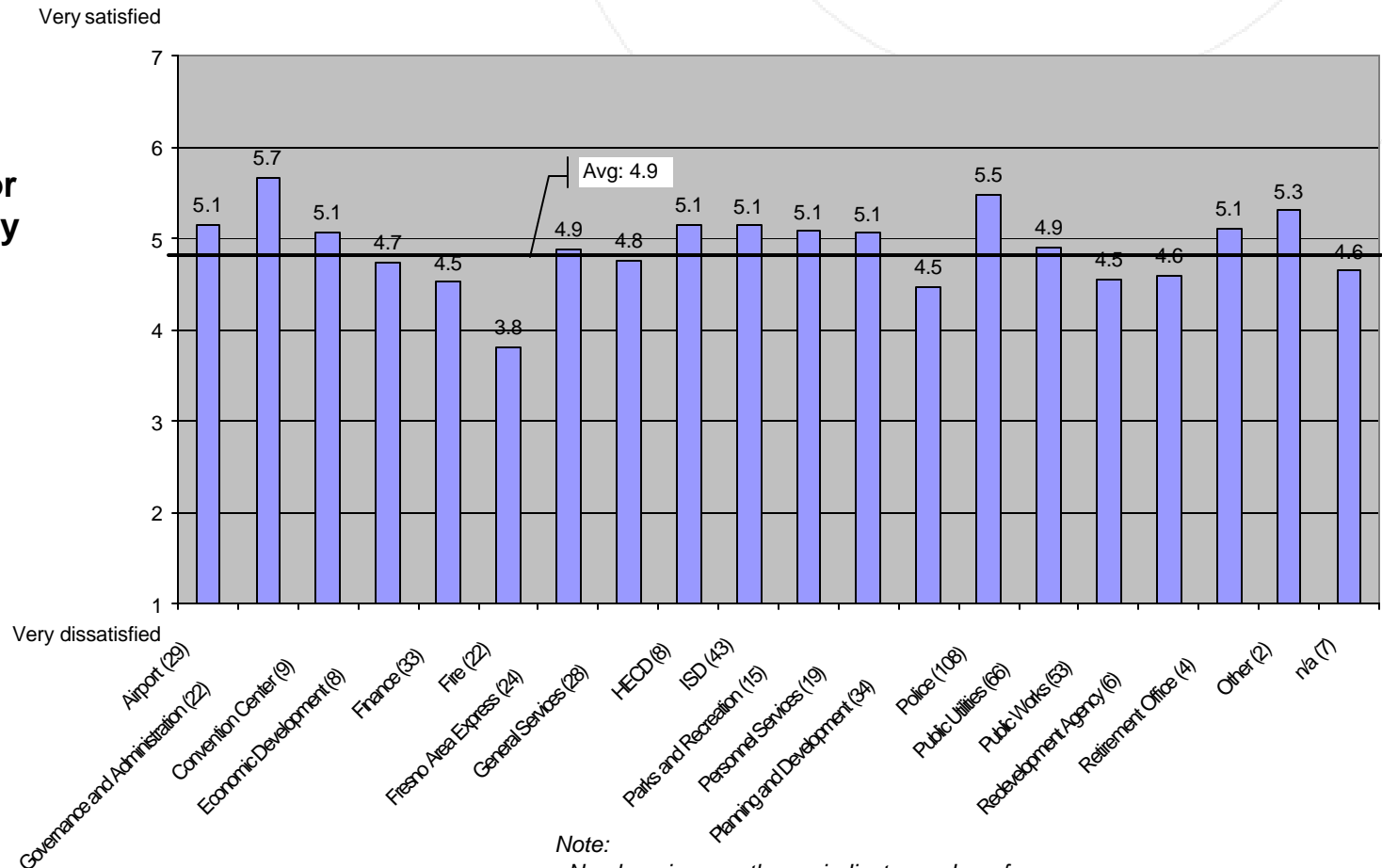
- Numbers in parentheses indicate number of responses
- Governance and Administration includes the City Attorney's Office, City Clerk's Office, City Council, City Manager's Office, and the Mayor's Office

Average Score: Service Delivery by Department

APPENDIX

A

Satisfaction with IT Service Delivery by Department



◆ The graph to the right depicts the average scores for service delivery by department

Note:

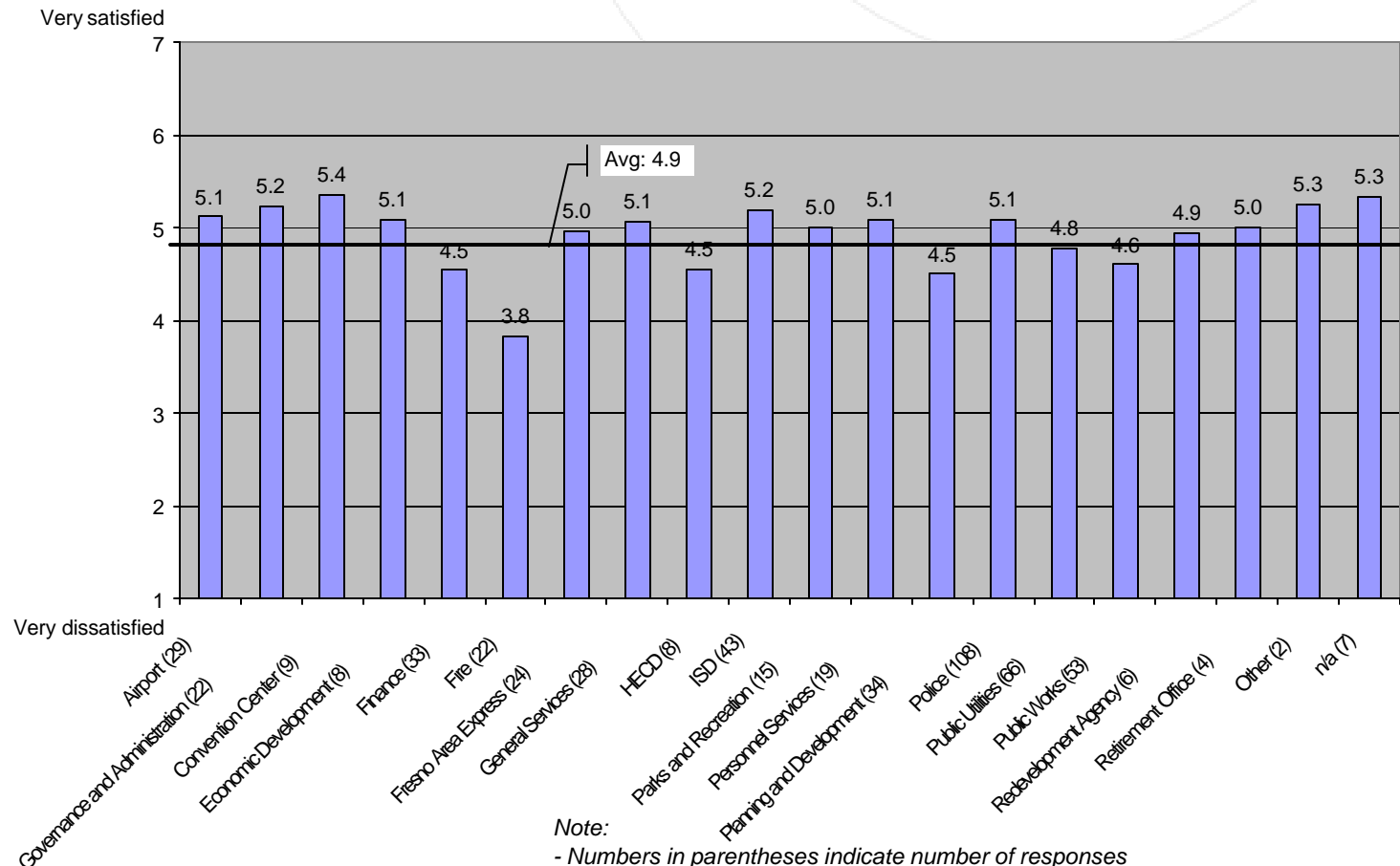
- Numbers in parentheses indicate number of responses
- Governance and Administration includes the City Attorney's Office, City Clerk's Office, City Council, City Manager's Office, and the Mayor's Office

Average Score: Applications by Department

APPENDIX

A

Satisfaction with Applications by Department



Note:

- Numbers in parentheses indicate number of responses
- Governance and Administration includes the City Attorney's Office, City Clerk's Office, City Council, City Manager's Office, and the Mayor's Office

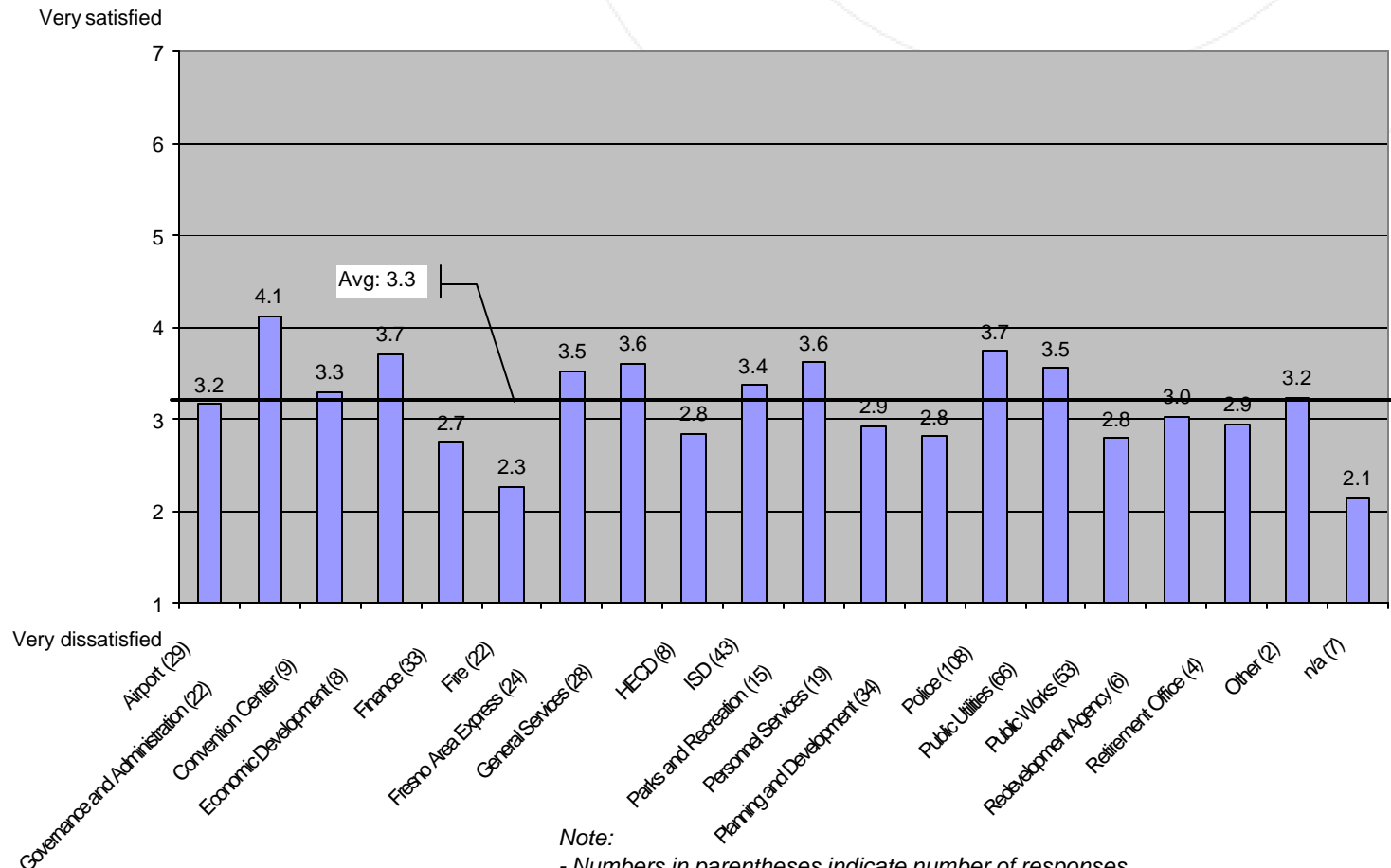
Average Score: IT Decision Making by Department

APPENDIX

A

Satisfaction with IT Decision Making by Department

- The graph to the right depicts the average scores by department related to IT decision making



Note:

- Numbers in parentheses indicate number of responses
- Governance and Administration includes the City Attorney's Office, City Clerk's Office, City Council, City Manager's Office, and the Mayor's Office

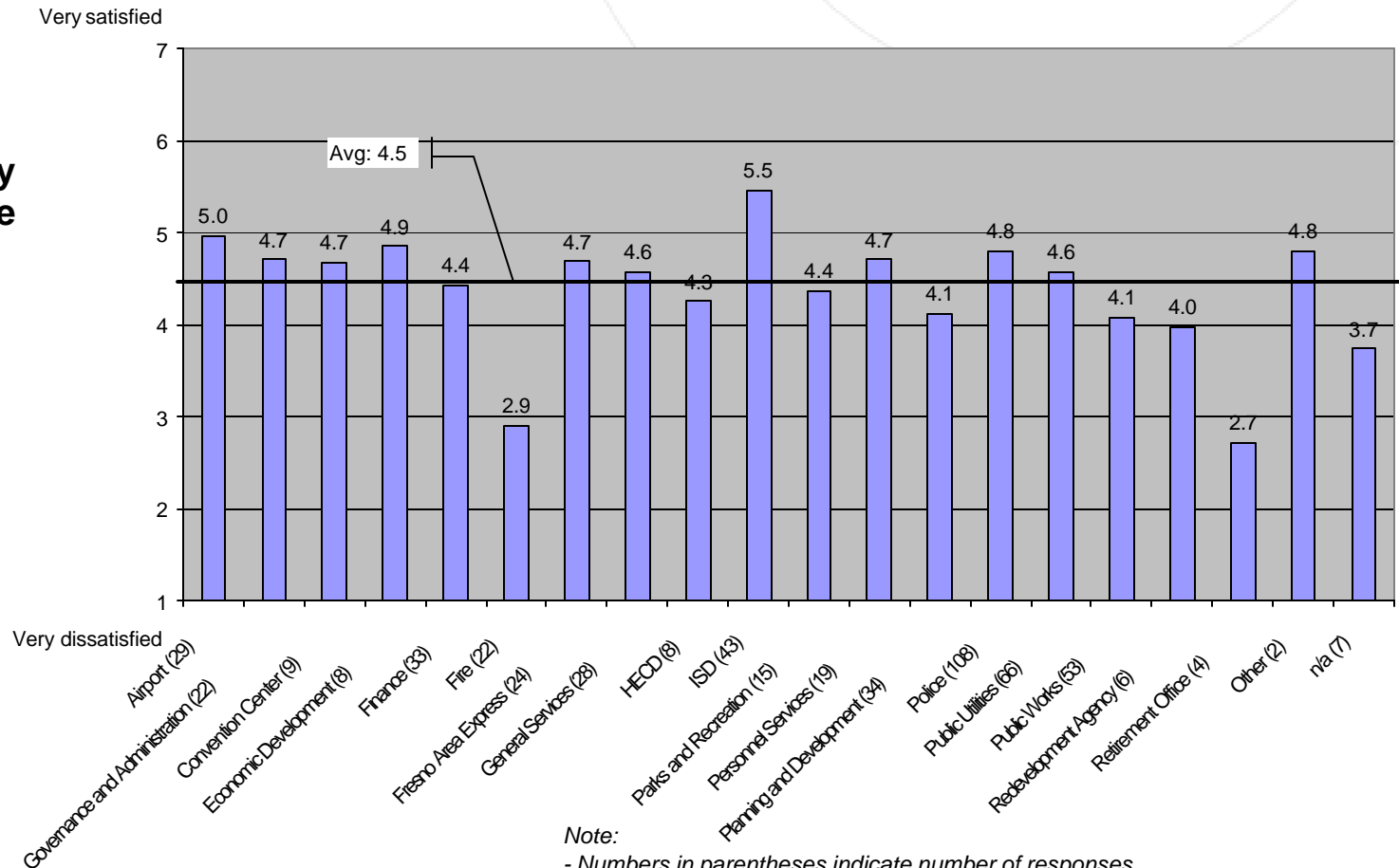
Average Score: Technical Infrastructure by Department

APPENDIX

A

Satisfaction with Technical Infrastructure by Department

- The graph to the right depicts the average scores by department on the City's technical infrastructure



Note:

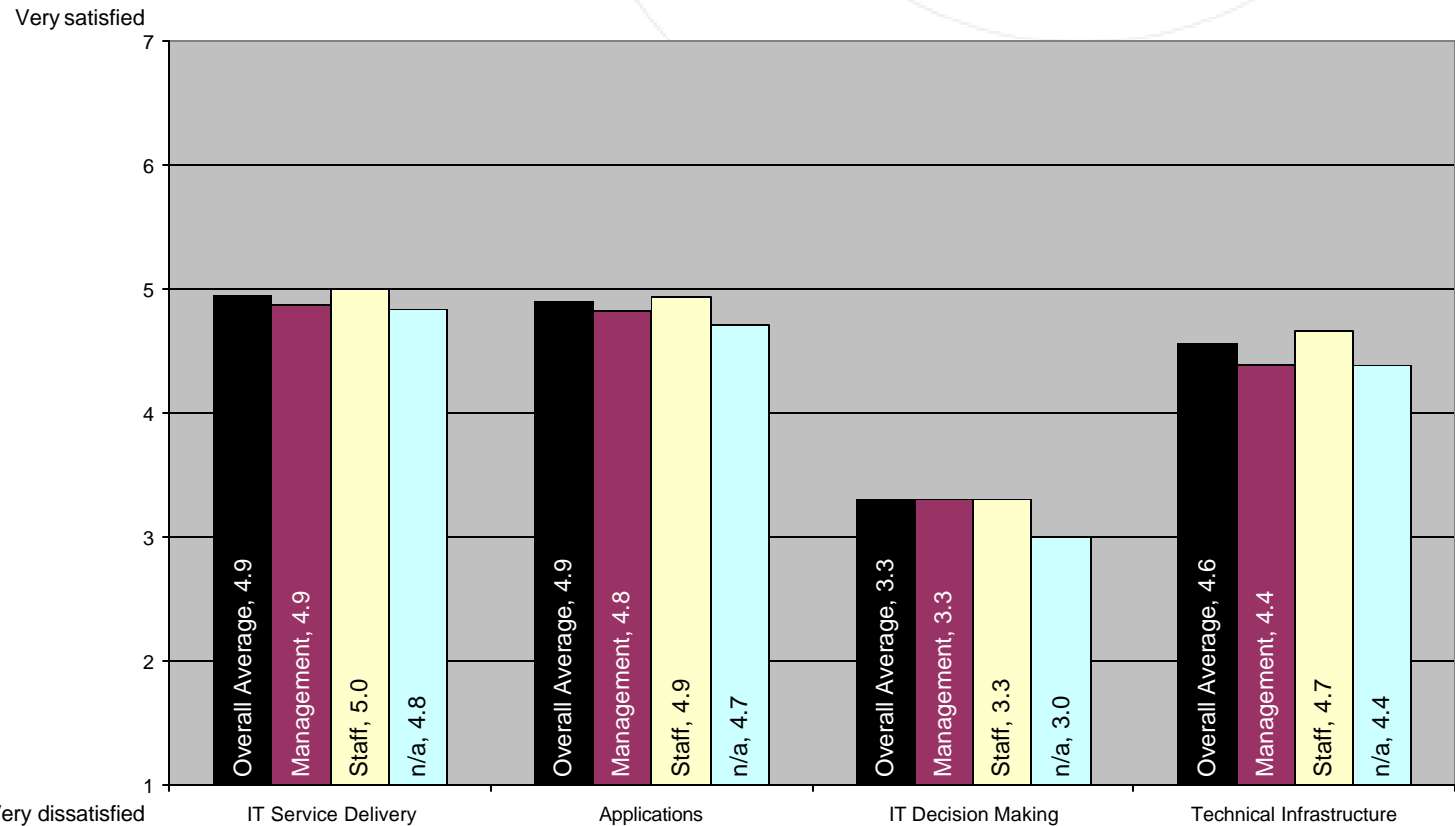
- Numbers in parentheses indicate number of responses
- Governance and Administration includes the City Attorney's Office, City Clerk's Office, City Council, City Manager's Office, and the Mayor's Office

Average Score: by Employee Level

APPENDIX

A

Satisfaction by Dimension and Position

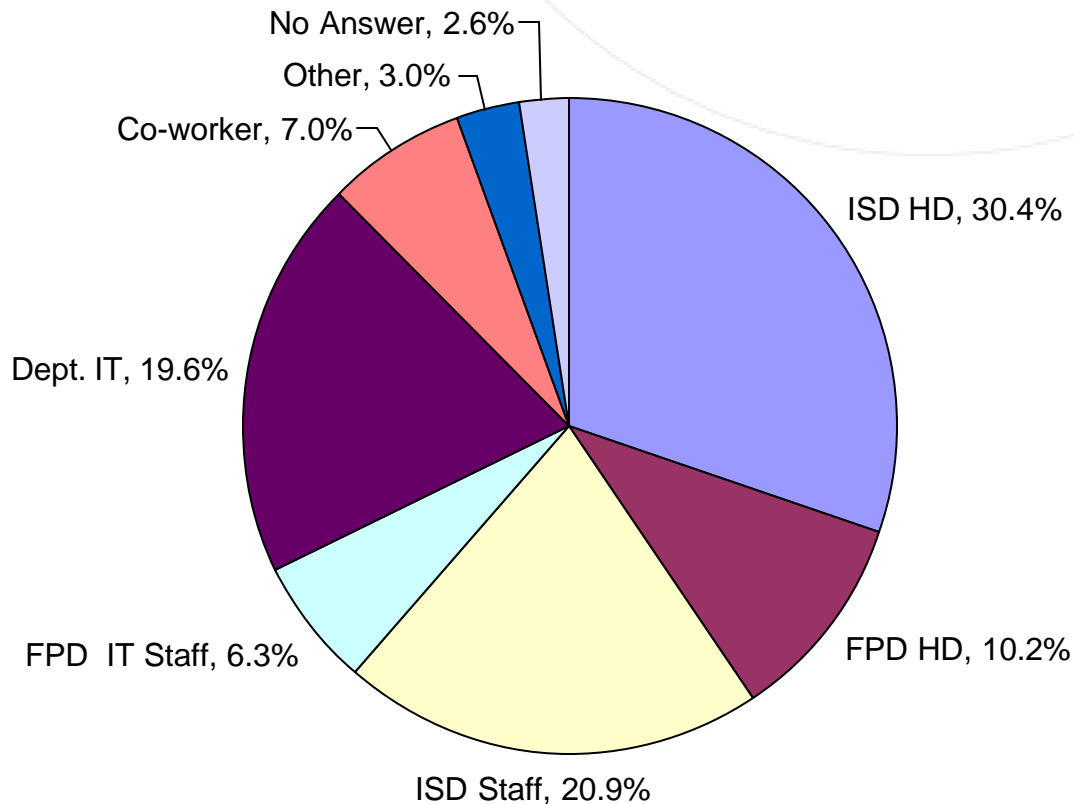


◆ The graph to the right depicts the average scores by employee level: Staff or Management

[Primary Source of Support]

APPENDIX A

I receive my primary IT support from:



- ◆ The pie chart to the right depicts the various sources that City staff go to for IT support

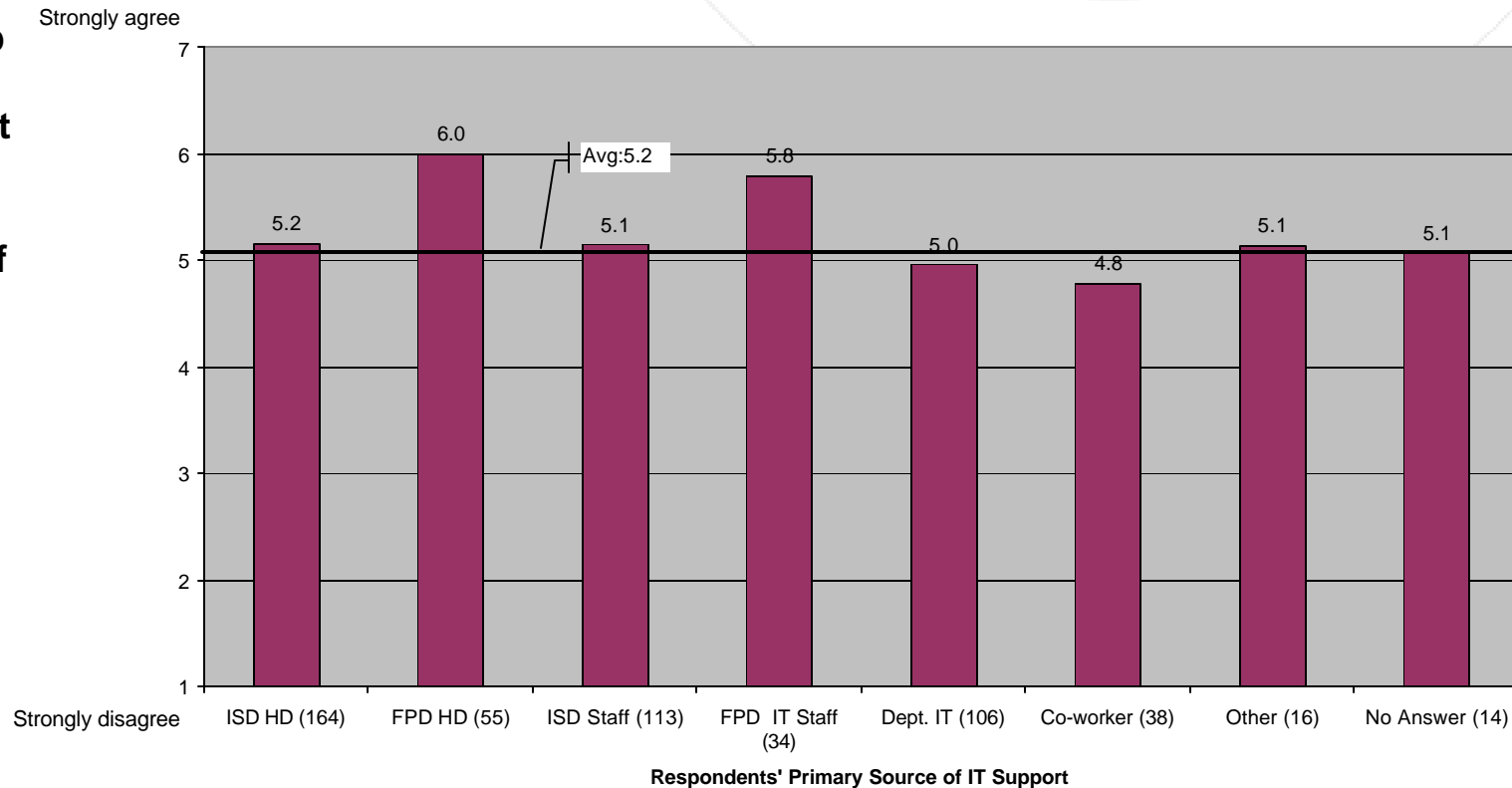
[Primary Source of Support: Help Desk Satisfaction]

APPENDIX

A

Response to Statement 8: "I am satisfied with the response I receive when I call the Help Desk."
by Primary Support Type

- ◆ The graph to the right depicts help desk satisfaction (survey statement no. 8) according to respondents' primary source of IT support



Primary Source of Support: Within Departments

APPENDIX

A

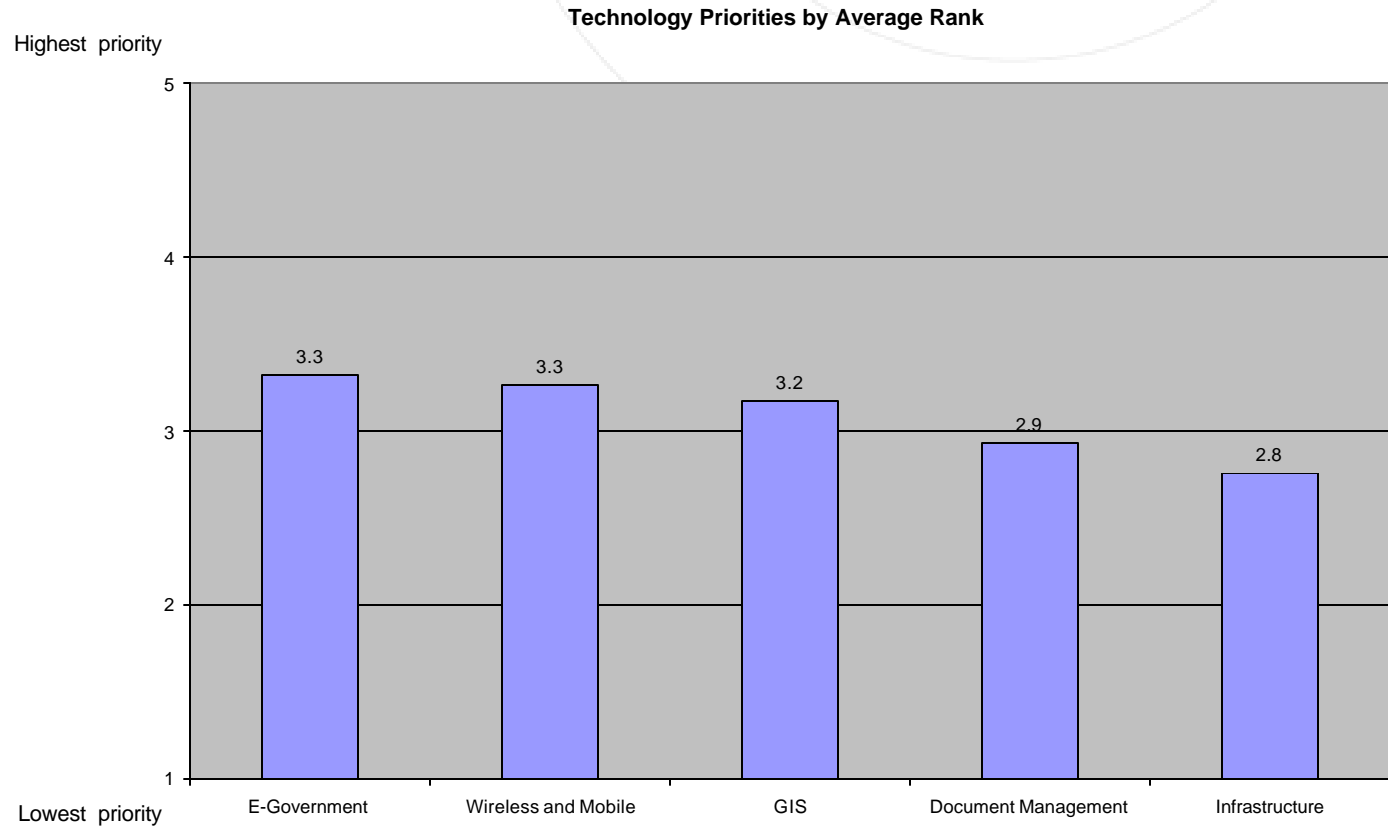
- The chart to the right outlines the various sources that staff from each department go to for primary IT support

Departments:	Primary Source of Support (no. of responses for each source):							
	ISD HD	FPD HD	ISD Staff	FPD IT Staff	Dept. IT	Co-worker	Other	No Answer
Airport (29)	0	0	0	0	27	1	0	1
Governance and Administration (22)	6	0	12	0	2	1	1	0
Convention Center (9)	7	0	1	0	0	1	0	0
Economic Development (8)	5	0	1	0	1	0	0	1
Finance (33)	18	0	12	0	0	1	2	0
Fire (22)	13	0	5	0	0	2	1	1
Fresno Area Express (24)	0	0	3	0	17	4	0	0
General Services (28)	17	0	7	0	1	3	0	0
HECD (8)	6	0	2	0	0	0	0	0
ISD (43)	7	2	22	0	3	2	6	1
Parks and Recreation (15)	0	0	1	0	14	0	0	0
Personnel Services (19)	13	0	6	0	0	0	0	0
Planning and Development (34)	19	0	11	0	1	2	1	0
Police (108)	8	53	2	32	2	10	0	1
Public Utilities (66)	16	0	12	1	27	7	3	0
Public Works (53)	23	0	13	0	11	4	1	1
Redevelopment Agency (6)	3	0	2	1	0	0	0	0
Retirement Office (4)	3	0	1	0	0	0	0	0
Other (2)	0	0	0	0	0	0	1	1
n/a (7)	0	0	0	0	0	0	0	7
Overall/Total	164	55	113	34	106	38	16	14

[Technology Priorities]

APPENDIX A

- ◆ The graph to the right depicts the average priority rank of technology investments, as ranked by respondents



Survey Questions/ Average Score by Department

APPENDIX

A

The remainder
of this appendix
presents the
survey
questions and
the associated
average scores
by department

		Average	Airport	Governance and Administration	Convention Center	Economic Development	Finance	Fire	Fresno Area Express	General Services	HECD	ISD	Parks and Recreation	Personnel Services	Planning and Development	Police	Public Utilities	Public Works	Redevelopment Agency	Retirement Office	Other	n/a
IT Service Delivery																						
1	City IT staff are skilled and capable.	5.4	5.6	6.0	5.2	5.3	4.9	4.5	5.2	5.1	5.6	6.2	5.5	5.5	5.2	5.9	5.5	5.0	5.4	4.8	5.5	4.7
2	City IT functions are adequately staffed.	3.4	3.4	4.6	2.4	3.0	3.0	2.5	3.9	3.7	3.6	2.4	4.6	3.3	3.0	4.1	3.8	3.2	2.7	3.5	2.5	3.2
3	City IT functions are well managed.	4.0	4.1	5.1	3.8	3.4	3.1	3.6	4.3	3.8	4.0	3.5	4.7	4.0	3.5	5.0	4.0	3.6	2.8	4.0	4.0	3.6
4	City IT staff respond in a timely manner to my requests.	5.0	5.4	5.4	5.1	3.4	4.8	3.8	5.1	5.1	4.1	5.4	5.8	5.2	3.9	5.6	4.9	4.5	3.7	5.8	5.5	4.6
5	City IT staff communicate clearly.	5.2	5.7	6.2	5.4	5.1	4.8	4.1	5.1	4.7	6.1	5.3	5.1	5.6	5.0	5.5	5.0	4.8	4.8	5.7	4.0	5.4
6	City IT staff provide accurate information.	5.3	5.9	6.2	5.6	5.6	5.1	4.5	5.2	4.9	5.9	5.8	5.2	5.5	5.2	5.8	5.2	4.9	5.2	4.0	5.0	4.5
7	I am adequately notified of service interruptions.	5.5	5.8	5.5	5.6	5.8	5.0	4.2	4.7	5.2	6.7	5.7	5.5	5.8	5.3	6.0	5.4	5.1	5.7	6.0	5.5	5.1
8	I am satisfied with the response I receive when I call the Help Desk.	5.2	4.9	5.7	5.6	4.8	4.8	4.0	5.0	5.2	6.0	5.7	4.8	5.6	4.6	5.8	5.2	4.8	5.6	5.3	6.5	4.9
9	I am satisfied with the help I receive from IT staff when they visit my work area.	5.8	6.1	6.4	5.9	6.0	5.4	4.5	5.7	5.6	6.1	6.4	5.6	5.7	5.6	6.1	5.8	5.5	5.5	6.0	7.0	5.4
10	I am satisfied with after-hours computer support.	4.8	6.5	6.2	5.5	4.0	4.5	3.2	4.3	4.7	4.0	5.5	4.2	4.0	4.4	5.4	4.4	4.0	3.7	6.0	n/a	6.0
11	I am satisfied with the support I receive for my business applications.	4.9	5.3	5.1	5.7	4.7	4.3	3.6	4.7	4.6	5.5	5.8	5.0	4.8	4.3	5.6	4.7	4.1	5.0	5.0	6.5	4.2
12	I am satisfied with the IT-related training that I receive from City IT staff.	4.2	3.8	5.3	4.2	4.0	4.0	2.9	4.7	4.1	3.4	3.9	4.2	4.0	3.4	4.7	4.3	3.7	4.6	3.5	6.0	5.7
13	Overall I am satisfied with IT service delivery.	5.0	5.3	5.7	5.1	5.0	4.5	3.5	5.0	4.7	4.8	5.6	5.0	5.0	4.4	5.4	4.9	4.6	4.5	5.3	6.0	4.3

[Survey Questions (cont.)]

APPENDIX

A

		Average	Airport	Governance and Administration	Convention Center	Economic Development	Finance	Fire	Fresno Area Express	General Services	HECD	ISD	Parks and Recreation	Personnel Services	Planning and Development	Police	Public Utilities	Public Works	Redevelopment Agency	Retirement Office	Other	n/a
Applications																						
14	I am satisfied with WordPerfect Office (e.g. WordPerfect Quattro Pro etc.).	4.9	4.5	5.6	5.9	4.1	4.0	5.0	5.7	5.3	4.3	4.2	5.3	4.9	4.7	5.4	4.7	4.5	5.8	4.0	3.5	6.2
15	I am satisfied with Microsoft Office (e.g. MS Word Excel PowerPoint etc.).	5.5	5.9	5.5	4.5	5.3	5.8	3.8	4.9	5.0	5.9	5.6	5.7	5.2	5.3	5.8	5.2	5.7	5.6	5.7	5.5	7.0
16	I am satisfied with my email and scheduling software (i.e. Groupwise).	5.6	5.8	5.4	6.0	6.0	5.2	5.2	5.5	5.9	5.3	5.6	5.7	6.1	5.5	5.6	5.6	5.3	5.0	5.7	6.5	5.7
17	I can easily share data between applications and find the information I need.	5.0	5.6	4.9	5.7	4.0	4.5	3.6	4.9	4.8	5.0	5.4	5.1	4.8	4.5	5.0	5.0	5.2	5.7	5.3	5.5	5.8
18	I am satisfied with the timekeeping system.	4.6	5.2	4.8	n/a	4.4	5.4	4.5	4.1	3.9	7.0	4.0	4.2	4.0	3.8	5.0	4.8	4.4	5.3	n/a	n/a	5.7
19	I am satisfied with financial management system.	4.4	3.9	4.8	4.5	5.0	4.4	4.4	3.2	5.5	2.0	5.5	4.4	4.8	5.5	4.3	4.4	3.6	2.0	5.0	4.0	4.0
20	I am satisfied with the human resource management system.	4.6	4.3	4.8	4.7	4.0	4.5	4.6	4.3	5.5	1.0	5.2	4.2	4.9	4.8	4.6	4.4	4.2	4.0	n/a	n/a	n/a
21	I am satisfied with the work/maintenance management system.	4.6	5.1	5.0	n/a	5.0	4.7	3.7	5.0	5.8	2.0	4.9	3.3	6.5	4.1	4.5	4.5	4.0	4.5	n/a	n/a	n/a
22	I am satisfied with the permitting system.	4.4	4.3	3.5	n/a	6.0	4.0	3.9	4.7	5.0	4.0	4.9	3.0	6.0	4.1	5.1	4.2	4.3	6.0	n/a	n/a	n/a
23	I am satisfied with the utility billing system.	4.5	4.0	5.0	n/a	5.3	4.8	5.0	3.5	4.5	5.0	5.1	2.0	6.0	4.3	5.0	4.0	4.5	n/a	n/a	n/a	7.0

Survey Questions (cont.)

APPENDIX

A

		Average	Airport	Governance and Administration	Convention Center	Economic Development	Finance	Fire	Fresno Area Express	General Services	HECD	ISD	Parks and Recreation	Personnel Services	Planning and Development	Police	Public Utilities	Public Works	Redevelopment Agency	Retirement Office	Other	n/a
Applications cont.																						
24	I am satisfied with the business tax and licensing system.	4.1	4.5	3.5	n/a	5.0	2.2	5.0	3.0	5.0	4.0	4.7	2.0	6.0	3.2	5.1	5.2	4.2	n/a	n/a	n/a	n/a
25	I am satisfied with the parks- and recreation-related systems.	4.8	5.0	3.0	n/a	5.0	5.0	5.5	5.5	6.5	7.0	5.1	4.7	6.0	3.0	5.3	4.1	4.4	5.0	n/a	n/a	6.0
26	I am satisfied with the fire CAD/RMS and mobile systems.	3.8	6.0	n/a	n/a	5.0	5.0	1.6	5.0	4.7	n/a	4.4	n/a	6.0	5.0	4.3	3.9	3.5	n/a	n/a	n/a	n/a
27	I am satisfied with the police CAD/RMS and mobile systems.	4.2	5.0	5.7	n/a	5.0	5.0	1.3	n/a	4.7	n/a	4.9	n/a	6.0	5.0	4.3	4.0	4.0	2.0	n/a	n/a	6.0
28	I am satisfied with the airport systems.	5.0	4.7	6.3	n/a	5.0	5.0	n/a	6.5	3.5	n/a	5.9	n/a	4.0	5.5	5.3	4.1	5.0	n/a	n/a	n/a	n/a
29	I am satisfied with the transportation systems.	4.7	5.4	6.0	n/a	5.0	5.0	4.0	5.2	6.0	n/a	5.4	n/a	n/a	3.3	4.8	4.0	3.5	7.0	n/a	n/a	n/a
30	I am satisfied with the GIS system.	4.7	5.5	4.7	6.0	5.5	4.5	2.9	5.0	4.0	4.8	5.4	3.8	5.3	4.3	5.0	4.5	4.6	5.5	n/a	3.0	5.5
31	I am satisfied with the City's Web site.	4.8	5.0	5.4	4.8	5.1	4.4	4.4	5.1	4.9	3.7	5.3	5.4	5.1	4.2	4.9	4.6	4.6	4.2	4.5	6.0	5.2
32	I am satisfied with the intranet.	5.2	5.5	5.6	5.8	5.9	4.7	4.4	5.2	5.5	4.5	5.6	5.6	5.1	4.8	5.4	5.0	4.9	5.3	5.0	6.0	5.4
33	I am satisfied with the imaging system.	4.5	4.9	4.4	5.0	4.5	4.4	4.4	5.3	4.1	3.3	3.9	4.6	2.0	3.5	5.0	4.8	4.2	4.3	n/a	n/a	4.5
34	I am satisfied with the SCADA system.	5.5	6.0	4.0	n/a	5.0	n/a	n/a	2.0	n/a	n/a	6.6	n/a	n/a	4.5	5.4	5.9	3.7	3.0	n/a	n/a	n/a
35	Overall I am satisfied with applications at the City.	4.8	5.1	5.3	5.6	5.6	4.3	3.7	5.0	5.1	4.1	5.6	5.1	5.1	4.4	5.1	4.7	4.3	4.8	5.0	5.5	4.2

[Survey Questions (cont.)]

APPENDIX

A

		Average	Airport	Governance and Administration	Convention Center	Economic Development	Finance	Fire	Fresno Area Express	General Services	HECD	ISD	Parks and Recreation	Personnel Services	Planning and Development	Police	Public Utilities	Public Works	Redevelopment Agency	Retirement Office	Other	n/a
IT Decision Making																						
36	I understand how the City makes technology-related decisions.	2.9	3.3	3.5	3.0	2.3	1.9	1.9	2.8	2.5	3.3	4.2	2.6	2.2	2.3	3.2	3.0	2.9	2.5	1.5	3.5	3.3
37	I am sufficiently represented in the technology-related decision-making process.	2.9	3.2	3.8	3.1	3.3	1.9	2.4	3.2	2.9	3.0	3.7	2.8	2.2	2.5	3.2	2.8	2.7	2.0	1.5	1.5	1.5
38	The City's overall technology-related decision-making processes are effective.	3.1	3.0	4.0	3.8	3.5	2.4	2.8	3.5	2.9	3.0	3.3	4.0	2.9	2.4	3.6	2.9	2.7	2.3	1.5	3.5	2.6
39	I believe that the City invests adequately in IT.	3.0	2.7	3.5	3.0	3.3	2.4	1.9	3.7	4.0	1.8	2.0	4.0	2.9	2.8	3.7	3.3	2.8	2.3	2.7	2.0	1.8
40	I believe that my department invests adequately in IT.	4.0	3.8	4.8	3.9	5.3	3.4	2.1	5.0	5.4	4.0	3.1	4.1	4.1	3.4	4.3	4.9	3.0	4.4	5.7	5.0	1.3
41	I believe that IT investments are fairly distributed across departments.	3.0	2.7	3.7	1.8	5.0	3.4	1.7	2.7	3.2	2.5	3.0	3.2	2.9	2.5	4.0	3.2	2.2	2.0	4.0	2.5	2.0
42	I believe that the City receives good value for its IT investments.	3.7	3.3	4.5	4.0	5.0	3.7	2.7	3.3	3.7	2.5	4.9	4.0	3.4	3.0	3.8	3.8	3.0	5.0	3.0	6.0	2.0
43	I believe that senior management effectively supports IT investments.	3.4	2.8	4.7	3.4	4.0	2.9	2.4	3.6	4.0	2.8	2.5	4.3	2.9	3.1	3.8	4.2	2.8	4.5	2.0	2.5	2.3
44	Overall I am satisfied with IT decision making.	3.5	3.3	4.6	3.5	4.0	3.0	2.7	3.8	3.9	2.6	3.6	4.1	2.8	3.0	4.0	3.7	2.9	2.5	3.0	4.0	2.6

[Survey Questions (cont.)]

APPENDIX

A

		Average	Airport	Governance and Administration	Convention Center	Economic Development	Finance	Fire	Fresno Area Express	General Services	HECD	ISD	Parks and Recreation	Personnel Services	Planning and Development	Police	Public Utilities	Public Works	Redevelopment Agency	Retirement Office	Other	n/a
Technical Infrastructure																						
45	The Citywide network is reliable.	4.8	5.5	4.9	5.3	5.1	4.5	3.8	4.6	4.3	4.9	5.8	4.3	4.9	4.3	5.2	4.7	3.9	4.2	2.5	4.0	4.3
46	The Citywide network is secure (e.g. safe from viruses etc.).	5.3	5.7	5.1	5.3	5.8	5.4	4.6	5.3	5.1	5.0	5.9	5.3	4.9	5.1	5.4	5.2	5.0	5.2	4.0	6.0	4.6
47	The City's hardware (e.g. my computer printers servers etc.) is up-to-date.	4.2	4.2	4.4	4.2	4.7	4.1	1.9	4.5	4.7	4.4	5.3	4.1	4.7	3.7	4.3	4.4	3.9	3.5	2.5	4.0	3.0
48	I am satisfied with my computer response time.	4.3	4.6	4.4	4.7	4.1	4.2	2.6	4.2	4.1	4.7	5.4	4.3	4.8	4.0	4.4	4.2	3.9	3.3	2.0	4.5	4.2
49	I am satisfied with mobile computing (e.g. field devices PDAs etc.).	3.7	4.1	4.5	3.0	3.0	2.8	1.4	3.9	3.3	2.3	4.3	2.5	2.0	3.3	4.2	4.7	2.6	4.0	n/a	n/a	3.0
50	I am satisfied with my ability to access the City's network from home.	4.5	4.8	4.5	4.0	4.4	4.3	3.0	5.2	4.9	3.0	5.2	4.3	4.3	3.9	5.0	4.4	4.3	3.8	3.0	6.0	1.0
51	Overall I am satisfied with the technical infrastructure.	4.5	5.3	5.0	4.6	5.3	4.3	2.6	4.9	4.7	4.0	5.6	4.8	4.5	4.0	4.8	4.6	4.0	4.0	2.5	5.5	3.0

[Survey Questions (cont.)]

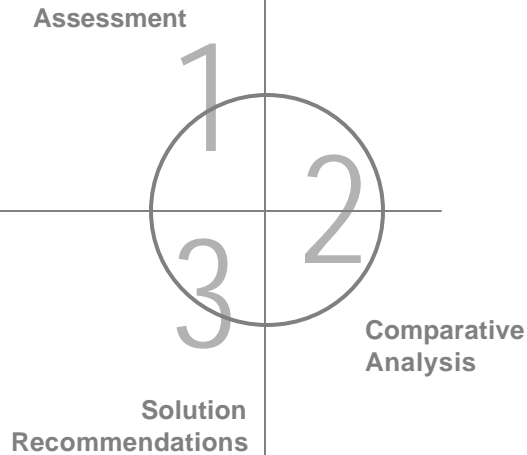
APPENDIX

A

		Average	Airport	Governance and Administration	Convention Center	Economic Development	Finance	Fire	Fresno Area Express	General Services	HECD	ISD	Parks and Recreation	Personnel Services	Planning and Development	Police	Public Utilities	Public Works	Redevelopment Agency	Retirement Office	Other	n/a
General																						
52	I have seen improvements in IT in the past six months.	4.0	4.5	4.9	3.5	4.2	3.1	2.7	3.4	4.0	4.0	5.3	3.9	4.0	3.2	4.5	3.9	3.9	3.7	3.3	3.0	2.4
53	I have the technology tools I need to do my job.	4.5	4.8	5.2	5.0	5.3	4.1	2.9	4.8	5.1	3.3	4.7	4.7	4.9	4.0	4.7	4.9	4.1	4.0	4.0	3.0	4.0
54	Please indicate how you would prioritize the City's investment in the following technologies (5-highest priority and 1-lowest priority:																					
	E-Gov	3.3	2.9	3.1	3.5	3.5	2.7	4.2	3.3	2.8	2.7	3.4	2.3	3.3	3.3	3.7	3.4	3.5	3.8	3.5	3.0	2.8
	DM	2.9	3.1	2.6	3.0	3.3	2.9	3.3	3.3	2.9	2.8	2.9	3.0	1.7	2.9	3.2	2.8	2.6	3.2	2.3	5.0	3.4
	GIS	3.2	3.6	3.9	3.3	2.2	3.3	2.7	3.0	3.5	3.5	3.1	2.8	4.2	2.7	3.4	3.3	2.6	2.0	3.5	4.0	3.6
	Infra	2.8	2.8	2.1	2.0	3.3	2.2	2.5	3.9	2.8	3.0	2.7	3.5	2.3	2.9	2.6	2.8	2.8	3.2	1.5	5.0	3.2
	Mobile	3.3	2.9	3.5	3.5	2.7	4.1	3.0	2.7	4.0	3.2	3.6	3.5	3.7	3.6	2.4	3.4	3.7	2.8	4.3	4.0	3.2

APPENDIX

B



IT staffing matrix
definitions

IT Staffing Matrix Definitions

APPENDIX

B

This appendix presents definitions of the functions included in the IT staffing matrix contained in this report.

- ◆ **As part of our assessment, we gathered information on the IT staffing levels within Fresno**
- ◆ **IT staff were asked to quantify their workload associated with each of the functions defined on the following pages**
- ◆ **This appendix presents definitions for the staffing matrix's five functional areas and their subordinate functions**

IT Staffing Matrix Definitions

APPENDIX

B

CUSTOMER SERVICES

Those functions related to directly supporting users of IT systems and services.

◆ **Help Desk (Tier 1)**

The activities related to providing a first point of contact for users to report problems. Includes initial problem resolution, triage, and problem escalation.

◆ **Desktop PC Support (Tier 2)**

The activities related to setup, installation, maintenance, and support of the organization's personal productivity software (e.g., Microsoft Office), network applications (e.g., calendar, email, etc.), desktop computers, mobile computing devices (e.g. PDAs, etc.), and peripherals.

◆ **Business Application Support**

The activities related to setup, installation, maintenance, and support of business-specific software.

◆ **Training**

The activities related to providing technology-related instruction to staff aimed at enhancing their skills, knowledge, and performance. Includes training requirement analysis, course design and development, and training delivery.

IT Staffing Matrix Definitions

APPENDIX

B

SYSTEM SERVICES

Those functions related to implementing, maintaining and supporting the organization's computers, systems software, and connectivity.

◆ Network Connectivity (WAN/LAN)

The activities related to implementing and maintaining the operational integrity of the organization's local and wide-area networks. Technologies include building wiring, fiber optic data circuits, and point-to-point technologies such as laser and microwave. These activities include responding to user requests for assistance, performance monitoring, coordinating with external network service providers and taking appropriate corrective actions as needed.

◆ Server Administration

The activities related to implementing and maintaining network servers. These activities also include administration and operation of servers and other logical network devices, performance monitoring, and administering configuration data.

◆ Data Center Operations

The activities related to administering the operation of the host/mainframe computing platforms, managing their operating systems to keep functionality at optimal performance levels, and managing associated peripheral devices.

IT Staffing Matrix Definitions

APPENDIX

B

SYSTEM SERVICES CONT'D

◆ Database Administration

The activities related to planning, implementing, and administering the data structures required to support the organization's applications portfolio, and to maintaining the data contained within the organization's defined data structures. Includes building and maintaining data structures, performance management and tuning, backup, and recovery.

◆ Security Administration

The activities related to developing, maintaining, and administering the security plan for the organization's host processors, servers, personal computers, communication devices and networks.

◆ Telephone Systems Support

The activities related to implementing and maintaining the operational integrity of the organization's voice network. This includes responding to user requests for assistance, administering data associated with the voice network, performance monitoring, and coordinating with telecommunications providers.

◆ Mobile Computing Support

The activities related to implementing and maintaining the operational integrity of the organization's wireless network. This includes responding to user requests for assistance, administering data associated with the wireless network, performance monitoring, and coordinating with network service providers.

IT Staffing Matrix Definitions

APPENDIX

B

BUSINESS APPLICATION SERVICES

Those functions related to providing, maintaining and supporting the use of software needed to meet the operational, management, and reporting requirements of the organization.

◆ **Application Development**

The activities related to engineering new software that meets system-wide needs, integrates third party software, and accommodates special requests. Includes major enhancements to existing applications. Development phases include design, coding, testing, and implementation.

◆ **Custom Application Maintenance**

The activities related to updating and making minor enhancements to existing software applications to meet new requirements and comply with external mandates. Includes installing new releases and bug fixes, web-enabling the application, extracting data for use by other applications, customizing reports for users, and interfacing with vendor staff as required.

◆ **Package Application Maintenance**

The processes related to installing, integrating, interfacing, and testing business-specific packaged applications and their associated data, including managing vendor relationships and providing necessary business context for integration. Includes installing new releases and bug fixes, web-enabling the application, extracting data for use by other applications, working closely with users to identify and implement application requirements, customizing reports for users, and interfacing with vendor staff as required.

IT Staffing Matrix Definitions

APPENDIX

B

BUSINESS APPLICATION SERVICES CONT'D

◆ Small Application Support

The activities related to responding to user requests for assistance in using work-group automation tools that are often customized versions of standard productivity software (e.g. Access applications, complex Excel models, etc.). Also includes maintaining the applications.

◆ Website Design/Maintenance

The activities related to developing and maintaining the City's external and internal websites. Includes managing content and updating design. Excludes writing content and web-enabling custom/package applications.

◆ Requirements Analysis

The activities related to describing business needs, evaluating alternatives, recommending an approach to address the requirements, and creating the data and process models and detailed specifications for software that would meet the requirements.

IT Staffing Matrix Definitions

APPENDIX

B

IT PLANNING

Those functions related to the planning and oversight of the technology function at the organization.

◆ Strategic Planning

The processes related to identifying and evaluating future directions for IT staffing, applications, and IT infrastructure for the organization, including: capacity planning, application and technical architecture planning, and feasibility studies.

◆ Research and Development

The processes related to evaluation and testing of current and future IT products and services, and to the deployment of pilot projects to test the viability of these technologies for the organization. Includes dissemination of relevant information to appropriate parties.

◆ Disaster Recovery/Planning

The processes related to developing, maintaining, updating, and testing the organization's IT disaster recovery/business resumption plan, and to activating and managing the plan in the event of a disaster.

◆ Governance Coordination

The processes related to supporting the organization's management on matters related to IT decision-making. Activities may include coordinating meetings, establishing agendas, providing background materials and recommendations, keeping minutes and preparing presentations.

IT Staffing Matrix Definitions

APPENDIX

B

IT ADMINISTRATION

Those functions related to the planning, oversight, and security of the technology function at the organization.

◆ Asset Management

The processes related to managing the IT properties of the organization. Includes tracking serial numbers, licenses, warranties, and inventory.

◆ IT Procurement

The processes related to acquisition of goods and services in support of all IT functions; including the development of RFP's, evaluation and selection of vendors, management of purchasing activities, receipt and inventory of goods, and tracking of warranty information and performance guarantees.

◆ Project Management

Those processes related to the oversight and coordination of major technology initiatives.

◆ Standards and Policies Development

Those activities related to the creation and updating of enterprise-wide IT standards and policies related to hardware, software, procurement, security, staffing, etc.

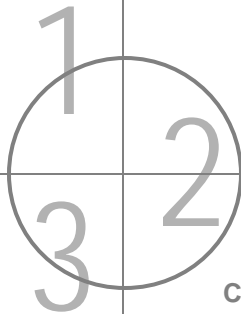
◆ Administrative Support

The activities related to the provision of clerical, administrative, and related services required for the ongoing operation of the IT department.

◆ Departmental Management

The processes related to management and oversight of the organization's technology functions, including: staff evaluation, quality assurance, and budgeting.

Assessment



Comparative
Analysis

Solution
Recommendations

**project cost
assumptions**

Project Cost Assumptions

APPENDIX

C

This chapter presents the underlying cost information for the projects presented in Chapter 5 of the report. We have divided the projects into two categories:

- ◆ **Planning Projects** – Those projects focused on service delivery, management efforts and future IT directions
- ◆ **Capital Projects** – Those projects that involve major IT purchases of systems or software

The remainder this chapter documents our assumptions.

[Planning Project Cost Assumptions]

APPENDIX

C

This section presents planning project cost assumptions:

Project		Cost Assumptions
P1	Complete strategic planning processes	<p>Upper cost estimate assumes outside assistance is required. Cost estimates for each component of the strategic plan follow:</p> <ul style="list-style-type: none"> • \$50K – completion of the Citywide strategic plan • \$210K – strategic IT plans at \$70K each for 4 large departments (Police, Utilities, Public Works, and 1 other dept that may fall into this category) • \$135K – strategic planning for smaller departments at \$45K each (Airport, Transit, Fire) • \$50K – strategic planning for all other departments
P2	Enhance CIO responsibilities	<p>Lower estimate assumes that outside assistance will be minimized (30% of upper costs) and that majority of work will be performed internally.</p> <p>Upper cost estimate assumes outside assistance of 200 hours at \$125/hr plus 15% for expenses. Lower estimate assumes that outside assistance will be minimized (30% of upper costs) and that majority of work will be performed internally.</p>
P3	Create decision-making and governance structures to support codified responsibilities	<p>Upper cost estimate assumes outside assistance of 240 hours at \$125/hr plus 15% for expenses. Lower estimate assumes that outside assistance will be minimized (30% of upper costs) and that majority of work will be performed internally.</p>
P4	Implement organization and staffing recommendations	<p>Estimates do not include the cost of new staff. Upper cost estimate assumes outside assistance of 240 hours at \$125/hr plus 15% for expenses. Lower estimate assumes that outside assistance will be minimized (30% of upper costs) and that majority of work will be performed internally.</p>

[Planning Project Cost Assumptions, cont.]

APPENDIX

C

Project		Cost Assumptions
P5	Implement funding recommendations	Assumes that tracking mechanisms are in place to charge use fees for application services. Upper cost estimate assumes outside assistance of 240 hours at \$125/hr plus 15% for expenses. Lower estimate assumes that outside assistance will be minimized (30% of upper costs) and that majority of work will be performed internally.
P6	Conduct Data911 project review and strategy development	Upper cost estimate assumes outside assistance of 320 hours at \$125/hr plus 15% for expenses. Lower estimate assumes that outside assistance will be minimized (30% of upper costs) and that majority of work will be performed internally.
P7	Update strategic GIS plan	Upper cost estimate assumes outside assistance of 680 hours at \$125/hr plus 15% for expenses. Lower estimate assumes that outside assistance will be minimized (30% of upper costs) and that majority of work will be performed internally.
P8	Develop e-Government plan	Upper cost estimate assumes outside assistance of 350 hours at \$125/hr plus 15% for expenses. Lower estimate assumes that outside assistance will be minimized (30% of upper costs) and that majority of work will be performed internally.
P9	Determine future FMS/HRMS direction	Upper cost estimate assumes outside assistance of 350 hours at \$125/hr plus 15% for expenses. Lower estimate assumes that outside assistance will be minimized (30% of upper costs) and that majority of work will be performed internally.

[Capital Project Cost Assumptions]

APPENDIX

C

This section presents capital project cost assumptions:

Project	Cost Assumptions
C1 Upgrade PeopleSoft	Upper and lower cost estimates are based on City estimates of varying levels of project scope. Upper cost would encompass a re-implementation, including reengineering existing business processes. Lower cost accounts for the software upgrade with little or no changes to business processes. Lower estimate assumes that outside assistance will be minimized (30% of upper costs) and that majority of work will be performed internally.
C2 Standardize computing environments	Costs range based on the potential variation of the City's application environment. For PC standardization, the costs are based on 2100 PCs, where upgrade support will cost between \$30 and \$40 per hour, and will take between 2 and 3 hours per PC. Related costs are for PC replacement (between 20% and 30% of PCs at a rate of \$800 to \$1100 per PC), operating system upgrades (between 20% and 50% of PCs at a rate of \$190 per PC), and MS Office suite purchasing (between 40% and 60% of PCs at a rate of \$280 to \$400 per PC). Application environment consolidation is based on 750 to 1000 hours at a rate between \$75 and \$100 per hour.
C3 Complete public safety CAD/RMS	At the low end, this project assumes the City is able to implement the current CAD/RMS solution for both police and fire through a direct application of effort. Specifically, 2 person years at \$125 per hour plus a 15% allowance for travel. Until a true project assessment can occur, this can only be considered a gross estimate. At the high end – the worst case scenario – the City will need to completely replace CAD and RMS for both Police and Fire, for a project cost of roughly \$5.1 Million (including procurement assistance at \$75,000) based on recent vendor bids.

[Capital Project Cost Assumptions, cont.]

APPENDIX

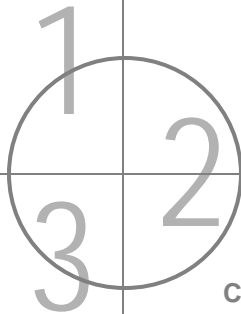
C

Project	Cost Assumptions
C4 Implement e-Government plan	Without a completed plan, it is difficult to determine the actual projects the City would prioritize as most important – therefore these numbers present gross planning estimates only. The low end cost assumes the City does minimal changes to its current architecture, implementing the HTE-based solution with minor additional changes to other applications. Estimates are based on minimal software costs (<\$100,000) and the majority of labor coming from internal staff. At the high-end, the City is assumed to do a comprehensive update of its approach to the Web, including implementation of automated content management with a commensurate price-tag. For planning purposes, we used estimates from a previous e-Government strategic plan, adjusted to match the City's services and to account for work already completed (i.e., site "face lift").
C5 Implement GIS plan	Without a completed plan, it is impossible to guess at the actual projects the City would prioritize as most important – therefore these numbers present gross planning estimates only. Further complicating matters is the potential for using mainly internal staff. At the low end, we assume two additional servers (\$45k per), additional storage (\$110,000 for a SAN), and approximately 20 upgraded workstations with licenses for ESRI products, large format printing, etc. for \$20k each. All implementation and design is conducted with internal staff. At the high end, we assume those costs, doubling the number of workstations and adding half a year for two consultants at \$125/hour.
C6 Procure and implement maintenance management	At the low end, the City finalizes the selection of Hansen and implements the product for approximately \$1.25M – a number corroborated by vendor proposals for similar clients. At the high end, again based on cost proposals for a similar client but adjusted for differences in services, the costs approach \$3.5M when procurement assistance is included – albeit for a more comprehensive solution for the City.

APPENDIX

D

Assessment



Comparative
Analysis

Solution
Recommendations

list of participants

IT SERVICE NEEDS ASSESSMENT

Appendix D: List of Participants

Name	Title	Department
Alverson, Kari	DBA	ISD
Anderson, Richard	Assistant Director	ISD
Araim, Lolita	Senior Accountant	Finance
Aranaz, Joel	Acting Chief	Fire
Arellano, Yvonne	Account Auditor	Finance
Avedisian, Kimberly	Senior Secretary	Airports
Barrett, Jeff	Convention Center	Operations
Barton, Sue	Executive Secretary	Fire
Baumgartner, Liz	Principal Account Clerk	FAX
Beardon, George	P/A III GIS	ISD/GIS
Beatty, Jeff	Management Analyst III	Payroll
Bier, Jim	Chief Engineering Tech	Utilities
Bishop, Jerry	Building & Safety Services Manager	Planning & Development
Bradley, Karen	Assistant Controller	Finance
Burkhardt, Fred	Director	Economic Development
Campos, Maria	Senior Secretary	Fire
Chavez, Juanita	Assistant Personnel Services Director	Personnel
Clark, Paula	Senior Accounting Clerk	Convention Center
Clausen, Douglas	CSS III	ISD
Cope, Roberta	Senior Accounting Clerk	Fleet
Cronin, Leanne	Management Analyst III	WWMD DPU

Assessment



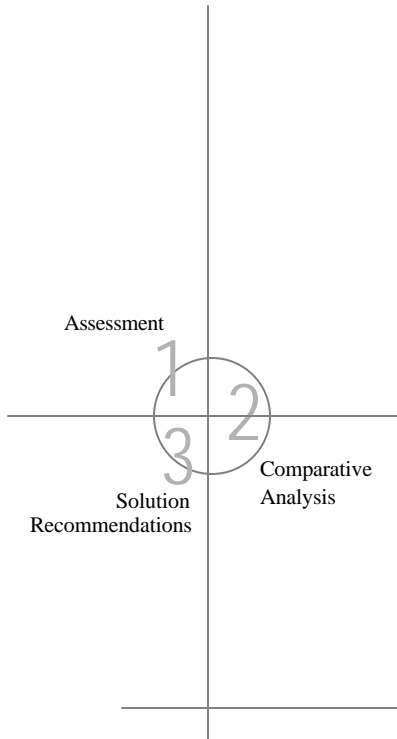
Comparative
Analysis

Solution
Recommendations

IT SERVICE
NEEDS
ASSESSMENT

Appendix D:
List of Participants

Name	Title	Department
DeGracia, Rosie	Management Analyst III	Convention Center
Derpinghaus, Susan	Management Analyst III	Fire
Dottai, Mike	Comm Manager	GSD
Elam, Jon	Assistant Director	
Eland, Nancy	Account Clerk II	Waste Water Management
Esquivel, Severo	Assistant City Manager	City Manager's Office
Feller, Kathi	Staff Assistant	ISD
Fifield, Darrell	Assistant Chief	Police
Flores, Sherree	SAT	Police
Gaddy, Garth	Chief of Operations	DPU/Water
Garcia, Debbie	Secretary	FAX
Garcia, Juanita	Senior Accounting Clerk	Streets Maintenance
Garcia, Judy	Grant Manager	Police
Garvis, Wayne	Senior Account Clerk	PW Admin
Getty, Mike		Finance
Gonzales, Adela	Director	Personnel
Gonzales, Joe	NSS	Airport
Harris, Tom	DBA	Police
Hartwig, Edwina	Senior Admin Clerk	Utilities
Hawkins, Susan	Property Specialist	Airports
Heinks, Heather	Marketing Assistant	Convention Center



IT SERVICE NEEDS ASSESSMENT

Appendix D: List of Participants

Name	Title	Department
Hendricks, Bob	CIO	ISD
Henkel, Steve	Senior Accountant/Auditor	Police
Hogg, Steve	Wastewater Manager	Wastewater
Houck, Harry	NSS	ISD
Hyde, Abbie	Senior Secretary	FAX
Hyder, Caroline	Principal Accounting Clerk	Planning & Development
Ishimoto, Ken	Information Services Manager	ISD
Jones, Dennis	Provisional IS Supervisor	ISD
Kelly, Christie	Executive Secretary	GSD/Admin
Krauter, Scott	Assistant Construction Manager	Public Works
Kuroda, Lorraine	Department Computer Specialist	Finance
Lagos, Noah	Director	Airports
Larkin, Jackie	Human Resources Tech	PSD
Lima, Michael	Airports Finance Manager	Airports
Long, Jeff	Management Analyst II	FAX
Lutter, Jim	CSS	Police
Martinez, Marie	Senior Accounting Clerk	Fire
McIntyre, Martin	Director	Utilities
Medina, Scirilo	Interim Operations Chief	Fire
Mendoza, Dan	Fire Captain	Fire
Miller, Laura	Staff Assistant	Purchasing

Assessment



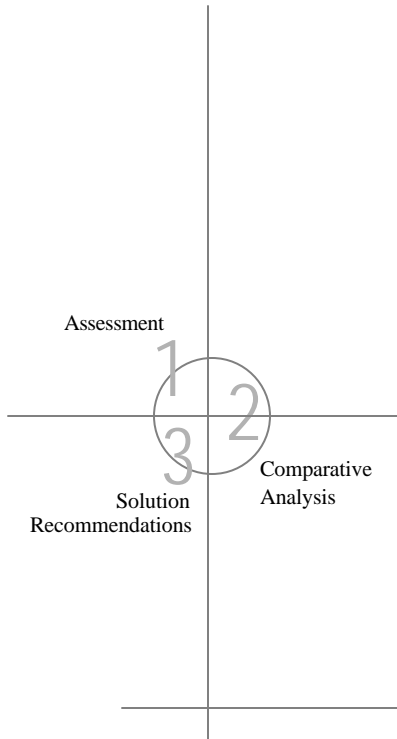
Comparative
Analysis

Solution
Recommendations

IT SERVICE NEEDS ASSESSMENT

Appendix D: List of Participants

Name	Title	Department
Montanez, Cora	Management Analyst II	City Manager's Office
Nerdahl, Conrad	Police IS Manager	Police
Nerland, Ken	Director	General Services
Onieu, Barbara	ISD Projects Manager	ISD
Palms, Velair	Principal Account Clerk	Personnel
Parangalan, Evelyn	Senior Accountant/Auditor	DPU/Water
Parker, Leslie	Engineer Aide II	Public Works/Transportation
Patteson, Sanjay	Programmer/Analyst III	Information
Putnam, Rick	Director	Parks
Quinto, Ruthie	Director	Finance
Rawlings, Brett	Programmer Analyst III	ISD
Reams, Brian	Revenue Manager	Finance
Rivera, Rosie	Account Tech	FAX
Roberts, James	Computer Systems Specialist	Police
Robison, Bruce	PA II	FAX
Rudd, Bruce		Airports
Saldivar, Terri	Executive Secretary	Finance
Sanchez, James	Chief Assistant Attorney	City Attorney's Office
Schoener, Leslie	Senior HR Analyst	PSD/Benefits
Scott, Darla	Senior Admin Clerk	Fire
Simonson, Beverly	Senior Accounting Clerk	GSD/Central Printing



IT SERVICE NEEDS ASSESSMENT

Appendix D: List of Participants

Name	Title	Department
Smith, Allen	Programmer III	ISD
Sorge, Martha	Senior Secretary	Planning
Tierce, Pat	Management Analyst III	DPU/Solid Waste
Tovar, Archie	NSS	ISD
Tsutsui, Shirley	Senior Account Clerk	Airports
Turnispeed, Cheryl	Information Services Supervisor	ISD
Vance, Alicia	Senior Secretary	Airports
Watshire, Rene	Business Office Manager	Police
Weaver, Jeanne	Principal Accountant	Payroll
Webster, Brion	Network Systems Specialist	DPW
Weibert, Chris	Labor Relations Secretary	Personnel
White, Carolyn	Senior HR Analyst	Personnel
Wilhelm, Jenny	Principal Accounting Clerk	Convention Center
Yovino, Nick		Planning

